

DEPARTMENT OF PUBLIC SAFETY

Title 13, Chapter 13, Article 1, School Bus Minimum Standards

Amend: R13-13-101; R13-13-102

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - REGULAR RULEMAKING

MEETING DATE: July 10, 2018

AGENDA ITEM: E-2

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF PUBLIC SAFETY (R-18-0703)
Title 13, Chapter 13, Article 1, School Bus Minimum Standards

Amend: R13-13-101; R13-13-102

SUMMARY OF THE RULEMAKING

This rulemaking, from the Department of Public Safety (Department or DPS), seeks to amend two rules in A.A.C Title 13, Chapter 13, Article 1, related to certification of school bus drivers. This rulemaking relates in part to the five-year review report approved by the Council on October 7, 2014. The Governor's Office granted an exemption from the moratorium on November 30, 2017.

A.R.S. §§ 28-3228, 41-619.51, 41-1758 and 41-1758.01 were recently amended to require school bus drivers to possess an identity verified fingerprint clearance card for certification with the Department. See H.B. 2247, Fifty-third Legislature, First Regular Session 2017. Under the Department's current rule, drivers are only required to possess a fingerprint clearance card. This rulemaking proposes to update the rule language to reflect the amended statutory requirement. Additionally, the Department proposes to add language regarding cancellation or suspension of bus driver certification for failure to comply with A.R.S. §§ 28-3228, 41-1758.03(D) and 41-1758.07(D), which detail situations where a clearance card is revoked or otherwise invalid.

Proposed Action

- R13-13-101 - *Definitions*: Add definitions for "fingerprint clearance card" and "identity verified clearance card."
- R13-13-102 - *Certification of School Bus Drivers*:
 - Strike requirement for bus drivers to submit fingerprint card and processing fee.
 - Add language requiring possession of identity verified fingerprint clearance card for certification.

- Add language requiring Department to cancel or suspend certification for violations of A.R.S. §§ 28-3228, 41-1758.03(D), or 41-1758.07(D).

1. Are the rules legal, consistent with legislative intent, and within the agency's statutory authority?

Yes. The Department cites to A.R.S. § 41-1713(A)(4) as general authority for the rules, which states “the Department shall make rules necessary for operation of the Department.” In addition, A.R.S. § 28- 3228 requires the Department to “adopt rules that establish minimum standards for the certification of school bus drivers.”

2. Do the rules establish a new fee or contain a fee increase?

No. The rules do not establish a new fee or contain a fee increase.

3. Summary of the agency's economic impact analysis:

The Department is aligning the rules with statutory changes that require school bus drivers to receive the same level clearance card as teachers and other school employees. The cost of the identity verified fingerprint clearance card (IVFCC) is \$67, an increase from the previous school bus driver background check fee of \$22. The \$67 fee is calculated as follows:

- \$15: Record Processing Fund, for initial state criminal history check
- \$10: Federal Bureau of Investigation, for federal criminal history check
- \$35: Fingerprint Clearance Card Fund, to administer the fingerprint clearance card program
- \$7: Board of Fingerprinting, for Board operations

The Department estimates that there are currently 5,971 existing school bus drivers that will need to obtain an IVFCC. The Department also estimates that, on an annual basis, 1,178 new school bus drivers will need to obtain the IVFCC.

4. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

The economic impacts of this rulemaking are predominantly caused by statutory mandates. School bus drivers will have increased costs in order to obtain an identity verified fingerprint clearance card. This rulemaking will ensure that the Department is complying with statute. The benefits outweigh the costs.

5. What are the economic impacts on stakeholders?

Key stakeholders are the Department, the Board, school bus drivers, school districts, and private school bus transportation businesses. The Department will benefit from this rulemaking because it will be complying with statutory mandates. The Department will also see modest

increases in revenue. The Board will benefit from this rulemaking because it will see a modest increase in revenue.

School bus drivers will bear the increased costs of obtaining an identity verified fingerprint clearance card. The cost will increase from \$22 to \$67, and the identity verified fingerprint clearance card will be valid for six years. The Department notes that the increased security requirements are created by statutes, not rules.

School districts will also bear some of the costs of this rulemaking. With a higher barrier for entry into the school bus driving occupation, school districts may have difficulty recruiting enough skilled workers for this occupation. School districts have the option to pay for the identity verified fingerprint clearance card if they are unable to recruit enough bus drivers. The Department notes that the increased security requirements are created by statutes, not rules.

Private school bus transportation businesses will be impacted in the same manner as school districts listed above.

6. Does the agency adequately address the comments on the proposed rules and any supplemental proposals?

Yes. The Department indicates that it received one comment during the oral proceeding on May 8, 2018. The comment raised various issues regarding expiration, notice, and justification. The comment, along with the Department's response, are on pages 4 and 5 of the Notice of Final Rulemaking. Council staff believes the Department adequately addressed the comment on the proposed rules.

7. Are the final rules a substantial change, considered as a whole, from the proposed rules and any supplemental proposals?

No. No changes were made between the proposed rules and the final rules.

8. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The Department indicates that no federal law applies to the rules.

9. Do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

Yes. The Department indicates that issuance of a general permit is not technically feasible due to the individual examinations, testing, and record review necessary for certification.

10. Does the preamble disclose a reference to any study relevant to the rules that the agency reviewed and either did or did not rely upon?

No. The Department did not review or rely on any study for this rulemaking.

11. Conclusion

If approved, this rulemaking will become effective immediately upon filing with the Secretary of State. The Department requests this immediate effective date under A.R.S. § 41-1032(A)(2) as the rule avoids violation of state law. Council staff recommends approval of the rulemaking.



ARIZONA DEPARTMENT OF PUBLIC SAFETY

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"Courteous Vigilance"

DOUGLAS A. DUCEY FRANK L. MILSTEAD
Governor Director

May 9, 2018

Ms. Nicole Ong Colyer, Chair
The Governor's Regulatory Review Council
100 N 15th Ave, Ste 402
Phoenix, AZ 85007

Dear Ms. Ong Colyer,

The Department of Public Safety submits a Notice of Final Expedited Rulemaking for Arizona Administrative Code Title 13, *Public Safety*, Chapter 13, *Department of Public Safety-School Buses*, Article 1, Sections 101 and 102 for review and approval by the council. The following information is provided pursuant to R1-6-201:

1. Close of Record Date: The rulemaking record was closed on May 8, 2018, pursuant to the Notice of Proposed Rulemaking following a period for public comment and an oral proceeding. The oral proceeding was held on May 8, 2018 with one attendee from the public and no written comments received. The public comments are included in the Notice of Final Rulemaking.
2. Relation to Five-Year Review Report: This rulemaking is not related to five-year review report.
3. Establishment of new fees: This rulemaking does not establish new fees.
4. Establishment of fee increase: The rulemaking does not establish a fee increase.
5. Request for immediate effective date under A.R.S. § 41-1032: An immediate effective date is requested. A.R.S. § 28-3228(D) was put into effect to protect the safety of children riding in school buses by conducting criminal activity background checks of school bus drivers and to comply with the timelines of the statute. By statute, all new school bus drivers or school bus drivers with expired clearances shall have the new identity-verified fingerprint clearance card by January 1, 2019. By statute, all new school bus drivers and drivers with expired certifications will have their certifications cancelled on January 1, 2019 if the drivers do not obtain a valid identity-verified fingerprint clearance card.
6. Evaluations of studies related to the rulemaking: No external studies related to the rulemaking were evaluated.

7. Necessity of Full-time Employees: The rulemaking does not require an increase in full-time employees to implement the rules.
8. List of Documents:
 - a. Signed cover letter.
 - b. Notice of Final Rulemaking including the Preamble and rule text.
 - c. Governor's Office rulemaking waiver approvals.
 - d. School Bus Advisory Council meeting agenda and minutes.
 - e. Authorizing statutes.
 - f. Economic Impact Statement.

Sincerely,



Colonel Frank L. Milstead
Director

PKS/pks

Enclosures

pertain to the record of the proposed rule:

Notice of Rulemaking Docket Opening: 23 A.A.R. 3497, December 22, 2017

Notice of Proposed Rulemaking: 24 A.A.R. 609, March 23, 2018

5. The agency's contact person who can answer questions about the rulemaking:

Name: Lance Larson, Sergeant

Address: Arizona Department of Public Safety

POB 6638, Mail Drop 1240

Phoenix, AZ 85009-6638

Telephone:(602) 712-5808

E-mail: llarson@azdps.gov

6. An agency's justification and reason why the rule should be made, amended, repealed, or renumbered, to include an explanation about the rulemaking:

The rules are being amended to update language relating to HB2247, Fifty-third Legislature, First Regular Session 2017 amending A.R.S. §§ 28-3228, 41-619.51, 41-1758 and 41-1758.01 relating to school bus drivers. The bill eliminated the need for school bus driver applicants to submit processing fees and a full set of fingerprints to the Department for the purpose of obtaining a state and federal criminal records check pursuant to A.R.S. § 41-1750 and Public Law 92-544. Effective August 8, 2017 pursuant to A.R.S. § 28-3228(C)(1) and (D), additional language requiring an identify verified fingerprint clearance card to become a certified school bus driver needs to be added to the rules. Additionally, language to allow for the cancellation or suspension of a school bus driver's certification should be added if the school bus driver violates the restrictions set forth in A.R.S. §§ 28-3228, 41-1758.03(D) and 41-1758.07(D).

In accordance with A.R.S. § 28-3228, the Department consulted with the Arizona School Bus Advisory Council on March 6, 2018 where the council voted and approved the proposed rulemaking.

The Department received a rulemaking waiver from Mr. Tim Roemer, Public Safety Policy Advisor to Governor Ducey on November 30, 2017.

7. A reference to any study relevant to the rule that the agency reviewed and proposes to

either rely on or not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

The Department did not rely on any study in its evaluation of or justification for the rule.

8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

The rulemaking does not diminish a previous grant of authority of a political subdivision of this state.

9. A summary of the economic, small business, and consumer impact:

The Department intends to amend R13-13-101 and R13-13-102 for the purpose of updating the language relating to recently signed House Bill 2247; which eliminated the need for school bus driver applicants to submit processing fees and a full set of fingerprints to the Department for the purpose of obtaining a state and federal criminal records check pursuant to A.R.S. § 41-1750 and Public Law 92-544. Effective August 8, 2017, and in accordance with A.R.S. § 28-3228, additional language requiring an identity verified fingerprint clearance card to become a certified school bus driver needs to be added to the text of the rule.

Under the current rule, all school bus drivers undergo a background check at a cost of \$22 per application, which is now outdated. There are approximately 7,856 bus drivers statewide with an approximate average annual new driver application rate of 1,178. As a result of new legislation, all existing and new school bus drivers will be required to obtain an identity verified fingerprint clearance card. The cost to obtain an identity verified fingerprint clearance card is \$67, which is valid for six years. The Department assesses a \$67 fee under A.R.S. § 15-106 for every clearance card application and renewal. The \$67 is derived from the following: \$15 is deposited into the Records Processing Fund to pay for the initial state criminal history check (A.R.S. §. 41-1750(J)); \$10 is allocated to the FBI for the federal criminal history check; \$35 is deposited into the Fingerprint Clearance Card Fund (A.R.S. §

41-1758.06) for the administration of the fingerprint clearance card program; and, \$7 is distributed to the Board of Fingerprinting Fund (A.R.S. § 41-619.56) to fund their operations.

The Department estimates there are approximately 5,971 existing school bus drivers that will need to obtain an identity verified fingerprint clearance card by December 31, 2018. The cost associated with the identity verified fingerprint clearance card will be the responsibility of the school bus driver applicants, school districts, and private transportation providers.

10. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

After consultation with the Governor's Regulatory Review Council staff, nonsubstantive changes were made. The Department narrowed the statutory references for *fingerprint clearance card* and *identity verified fingerprint clearance card* where the intended meanings stay the same. The proposed language in Section 102(K)(2) was amended to remove for clarity *based on the totality of the circumstances* as it is unneeded language when the intent is to cancel or suspend a certificate for a school bus driver under the statutory authorities listed.

11. An agency's summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

The Department consulted with the School Bus Advisory Council on March 6, 2018 pursuant to A.R.S. § 28-3228. The council had no substantive comments relevant to this rulemaking and during the open public comment portion of the agenda no public member from the audience spoke on the rulemaking. The council voted and approved of the rulemaking as presented in the Notice of Proposed Rulemaking at the March 6 meeting.

The Department conducted a public meeting on May 8, 2018 with one attendee.

Attendee: Mr. John Spilary, Agua Fria School District

Question: School bus drivers are upset that we have to get a new card costing us \$75 and our current one is no longer valid, why?

Answer: School bus drivers with cards issued before August 9, 2017 are grandfathered until they

expire. After August 9, 2017, any drivers with expired cards or new drivers are required to obtain the new identity-verified fingerprint card by January 2019. The cost is \$67.

Question: What federal law is requiring this and why do we have to go through new hoops to get this new card? Why was this law passed without driver input?

Answer: There is no related federal law, this is a state law requirement. While the Department understands Mr. Spilary's concerns, the Department is required to follow state law enacted by the Governor and legislature.

Question: Why do only school bus drivers need this? Other CDL commercial drivers are not required to have it.

Answer: Other commercial drivers are typically hauling cargo or adults and have separate rules to follow by the Arizona Motor Vehicle Division. School bus drivers are now statutorily mandated to receive the same level clearance card as teachers and other school employees for the protection of the children on the school bus. Previous to this new law, school bus drivers did not receive the same level of background check as teachers and other school employees; this law brings the school bus drivers up to the same standards.

Question: Why did DPS not notify any of the drivers and districts of the law change?

Answer: The Department notified all school district transportation directors over a year ago of the upcoming legislation and provides monthly e-mail updates to the transportation directors. The School Bus Advisory Council is aware of the legislative change. More specific information is available on the Department's website.

Question: If I get this new card while I'm working for my current district and then I change jobs to a new district, does my card remain valid and travel with me?

Answer: Yes, your card remains with you and remains valid until the expiration date on the card regardless of a change in employers.

The Department did not receive any written comments by the close of the rulemaking record as specified in the Notice of Proposed Rulemaking.

12. All agency's shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

a. Whether the rule requires a permit, whether a general permit is used, and if not, the reason why a general permit is not used:

Pursuant to A.R.S. § 28-3228, the rules require a permit for each individual driver of a school bus. For the safety of the transported children, each individual school bus driver is subject to a physical examination, controlled substance and alcohol testing, physical performance tests, must possess a driver license of sufficient endorsements, have a driving record review, and receive specialty training including first aid and cardiopulmonary resuscitation. These driver-specific requirements, pursuant to A.R.S. § 41-1037(A)(3) do not allow for a general permit to be issued.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law, and if so, citation to the statutory authority to exceed the requirements of federal law:

There is no corresponding federal law applicable to the rules.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

The Department did not receive any analysis that compares the rule's impact on business competitiveness in this state compared to other states.

13. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

Not applicable

14. Whether the rule previously made, amended, or repealed as an emergency rule. If so, cite the notice published in the Register as specified in R1-4-409(A). Also, the agency

shall state where the text was changed between the emergency and the final rulemaking packages:

The rule was not previously made, amended, or repealed as an emergency rule.

15. The full text of the rules follows:

TITLE 13. PUBLIC SAFETY
CHAPTER 13. DEPARTMENT OF PUBLIC SAFETY SCHOOL BUSES
ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

Section

R13-13-101. Definitions

R13-13-102. Certification of School Bus Drivers

ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

R13-13-101. Definitions

In this Chapter, unless otherwise specified:

“Accident” means any unexpected occurrence involving a moving or non-moving school bus that results in any bodily injury or fatality to a passenger or non-passenger, damage to personal or real property outside the school bus, or damage to the school bus that affects the integrity of the school bus or results in a major defect as described in R13-13-108(B).

“Alternately flashing signal lamps” means a system of red or red and amber lamps that are mounted horizontally to both the front and rear of the school bus body and used to inform the public that the school bus is preparing to stop or has stopped to load or unload passengers. Alternately flashing signal lamps can be either a four-lamp system as described in R13-13-107(17)(c)(i) or an eight-lamp system as described in R13-13-9-107(c)(ii).

“Alteration” means any addition, modification, or removal of any equipment or component after a school bus is inspected by the Department, which may affect the operations of the school bus; compliance with the statutes or rules applicable to school buses; or the health, safety, or welfare of any individual.

“Applicant” means an individual who submits an application to the Department to obtain a certificate to operate a school bus.

“ASE” means National Institute of Automotive Service Excellence.

“Auxiliary fan” means a device mounted inside the school bus body used to supplement the heating, defrosting, or air-conditioning systems by circulating air in the school bus.

“Behind-the-wheel instructor” means an individual qualified under R13-13-103 to provide behind-the-wheel training to applicants.

“Behind-the-wheel training” means the complete physical control of a school bus by an applicant while accompanied by and under direct observation of a behind-the-wheel instructor.

“Belt cutter” means a hand-held instrument containing a blade used to sever a seat belt or a wheelchair-securement device.

“Certificate” means a written authorization issued by the Department to operate a school bus in Arizona.

“Chassis” means the part of a school bus that consists of all base components, including the frame, front and rear suspension, exhaust system, brakes, engine, engine hood or cover, transmission, front and rear axles, front fenders, drive train and shaft, fuel system, engine air intake and filter, clutch and accelerator pedals, steering wheel, tires, heating and cooling system, battery, and controls and instruments to operate the school bus.

“Chassis cowl” means those parts of a Type C school bus that are located in front of the cowl and attached before a school bus manufacturer adds the school bus body.

“Citation” has the same meaning as at A.R.S. § 28-1872.

“Classroom instructor” means an individual qualified under R13-13-103 to provide classroom training to:

Applicants to operate a school bus,

Individuals becoming qualified to teach classroom training,

Individuals becoming qualified to teach techniques of behind-the-wheel training, or

School bus drivers taking refresher training.

“Classroom training” means the courses required by the Department of an applicant before the applicant is certified or of an individual seeking qualification as a classroom or behind-the-wheel instructor.

“Commercial driver license” has the same meaning as at A.R.S. § 28-3001.

“Controlled substances and alcohol testing” means a determination of an applicant's or school bus driver's use of marijuana, cocaine, phencyclidine, opiates, amphetamines, and alcohol prescribed by 49 CFR 382, October 2006 (no later amendments or editions), and conducted in accordance with the procedures at 49 CFR 40, October 2006 (no later amendments or editions), both published by the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference, and on file with the Department; and a determination of an applicant's or school bus driver's use of marijuana, cocaine, phencyclidine, opiates, amphetamines, barbiturates, benzodiazepines, methadone, and propoxyphene as required by these rules and conducted in accordance with a procedure that is generally accepted in the scientific community to be accurate and reliable.

“Cowl” means the portion of the chassis in a Type C school bus that separates the school bus engine from the school bus driver's compartment.

“Cutaway van” means a chassis to which a completed driver's compartment is attached before a school bus manufacturer adds a school bus body.

“dB(A)” means decibels A scale, a term denoting that noise level has been adjusted to duplicate human hearing.

“Driver's compartment” means the part of a school bus body that is separated from the passenger compartment by a barrier and contains the controls and instruments for the operation of the school bus.

“Emergency-brake system” means mechanical components used to slow or stop a school bus after a failure of the service-brake system.

“Emergency exit” means an opening in a school bus, including a door, push-out window, or roof hatch, used to unload passengers in the event of an occurrence that requires immediate evacuation of the school bus.

“Employer” means a private business or school district that hires applicants and certified school bus drivers to operate school buses.

“Fingerprint clearance card” has the same requirements as in A.R.S. § 41-1758.03.

“Frame” means the structural foundation upon which a school bus chassis is constructed.

“Frontage road” means a street that parallels an interstate highway and furnishes access to streets and property that would otherwise be unreachable from the interstate highway.

“Gross vehicle weight rating” means the value specified by the manufacturer as the maximum total loaded weight of a school bus, calculated in accordance with R13-13-106(27).

“Health care professional” means:

A physician licensed to practice medicine under A.R.S. § 32-1401 et seq., osteopathy under A.R.S. § 32-1800 et seq., or chiropractic under A.R.S. § 32-900 et seq.;

A physician licensed to practice medicine, osteopathy, or chiropractic in a state contiguous to Arizona;

A physician employed by the United States government and licensed by a state or territory of the United States;

A physician assistant licensed under A.R.S. § 32-2501 et seq.; or

A registered nurse practitioner licensed under A.R.S. § 32-1601 et seq.

“Highway” has the same meaning as at A.R.S. § 28-101.

“Identification” means the signs, lettering, or numbers placed on the interior or exterior of a school bus body, including the glass areas, but does not include the lettering, numbers, or logos of a manufacturer or distributor of the manufacturer's product.

“Identity verified fingerprint clearance card” has the same requirements as A.R.S. § 15-106.

“Ignition power-deactivation switch” means a device that when set causes the engine of a motor vehicle to stop operating if the transmission is placed into gear or the parking-brake system is released.

“Interstate highway” means the designation given by the federal government to the system of highways connecting two or more states of the United States.

“Lamp” means a device that is covered by a lens and used to produce artificial light.

“Major defect” means a condition that exists to the interior or exterior of a school bus that causes the Department or owner to place the school bus out of service while the defect is being corrected.

“Manufacturer” means an entity engaged in the manufacturing or assembling of a school bus chassis, school bus body, or school bus chassis and body.

“Medical practitioner” has the same meaning as at A.R.S. § 32-1901.

“Minor defect” means a condition that exists to the interior or exterior of a school bus that is not a major defect and allows the school bus to remain in operation while the defect is being corrected.

“Off-duty” means the time a school bus driver is not on-duty.

“On-duty” means the period between the time a school bus driver begins to work for the employer or is required to be ready to work for the employer until the time the school bus driver is relieved from work and all responsibility for performing work for the employer. The time on-duty is used only to determine when a school bus driver must be provided time

off-duty. Time on-duty may be compensated by the employer or an entity other than the employer or may be uncompensated. On-duty includes:

All time at an employer's place of business, waiting to be dispatched;

All time performing an operations check of a school bus in accordance with R13-13-108, or servicing or conditioning a school bus;

All time driving a school bus, including loading or unloading the school bus, and remaining in readiness to drive a school bus;

All time, at the direction of the employer, travelling but not driving a school bus or assuming any other responsibility to the employer. If the school bus driver is afforded at least eight consecutive hours off-duty upon arrival at the school bus driver's destination after travelling but not driving a school bus or assuming any other responsibility to the employer, the school bus driver shall be considered off-duty for the entire period travelling but not driving the school bus or assuming any other responsibility to the employer;

All time repairing, obtaining assistance, or remaining in attendance upon a disabled school bus;

All time preparing required reports and records;

All time providing a breath or urine sample, including travel time to and from the collection site, to comply with the testing requirements of this Chapter;

All time performing any other work for the employer; and

All time performing any compensated work for any entity other than the employer.

“Out of service” means a school bus cannot be used to transport passengers.

“Owner” means the public or governmental agency or institution or private company in whose name a school bus is titled.

“Parking-brake system” means mechanical components used to prevent the movement of a school bus while loading or unloading a passenger or when the school bus is parked.

“Passenger” means an individual who rides in a school bus but does not participate in the operation of the school bus.

“Passenger compartment” means that part of the school bus body that is separated from the school bus driver's compartment by a barrier and holds the passengers to be transported.

“Physical examination” means an evaluation of an applicant's or school bus driver's medical status performed by a health care professional according to this Article.

“Physical examination form” means the Arizona Department of Transportation, Motor Vehicle Division, Medical Examination Report, which is used to record the results of a physical examination and may be obtained from the Department or Arizona Department of Transportation, Motor Vehicle Division.

“Physical performance test” means an evaluation of an applicant's or school bus driver's reflexes, agility, and strength performed according to this Article.

“Physical performance test form” means the document used to record the results of a physical performance test and may be obtained from the Department.

“Push-out window” means safety glass enclosed in a frame on a school bus that moves to the outside of the school bus when force is applied to the window from inside the school bus.

“Refresher training” means the courses required by the Department of each school bus driver to maintain certification as a school bus driver in Arizona.

“Restraining barrier” means a structure located in front of any school bus seat that restricts the forward motion of a passenger.

“Rub rail” means a horizontal steel bar attached to the outside of a school bus body used to reinforce the sides of the school bus.

“Safety glass” has the same meaning as at A.R.S. § 28-959(F).

“School” means a school as defined by A.R.S. § 15-101(19), accommodation school as defined by A.R.S. § 15-101(1), charter school as defined by A.R.S. § 15-101(3), or private school as defined by A.R.S. § 15-101(18).

“School bus” has the same meaning as at A.R.S. § 28-101.

“School bus body” means a structure assembled upon a chassis designed to carry a school bus driver and passengers.

“School bus driver” means an individual who is certified by the Department as meeting the requirements at A.R.S. § 28- 3228 and R13-13-102 to operate a school bus in Arizona.

“School district” has the same meaning as at A.R.S. § 15-101 (20).

“Service-brake system” means mechanical components used to slow or stop a school bus.

“Service door” means a metal structure used to close the opening of a service entrance.

“Service entrance” means an opening in a school bus used to load or unload passengers.

“Special needs school bus” means a school bus that is designed to transport disabled passengers, some of whom may use a wheelchair, and is constructed with a service entrance and a special-service entrance.

“Special-service entrance” means an opening in a school bus that accommodates a wheelchair lift for the loading or unloading of a passenger who uses a wheelchair.

“Special-service entrance door” means a metal structure used to close the opening of a special-service entrance.

“Street” has the same meaning as at A.R.S. § 28-101.

“Traffic control signal” has the same meaning as at A.R.S. § 28-601.

“Training” means the instruction, courses, classes, or workshops provided by the Department or the employer that are required to obtain or maintain certification as a school bus driver or qualification as a classroom or behind-the-wheel instructor, or qualification to administer the physical performance test in Arizona.

“Transport” or “transporting” means a school bus driver sets a school bus in motion to carry passengers or objects authorized by the school district to be carried in a school bus.

“Type A school bus” means a conversion bus constructed utilizing a cutaway front section vehicle with a left side driver's door. This definition includes two classifications: Type A-1,

with a Gross Vehicle Weight Rating (GVWR) of 14,500 pounds or less; and Type A-2, with a GVWR greater than 14,500 pounds and less than or equal to 21,500 pounds.

“Type B school bus” means a school bus constructed utilizing a stripped chassis. The entrance door is behind the front wheels. This definition includes two classifications: Type B-1, with a GVWR of 10,000 pounds or less, and Type B-2, with a GVWR greater than 10,000 pounds.

“Type C school bus,” also known as a conventional style school bus, means a school bus constructed utilizing a chassis with a hood and front fender assembly. The entrance door is behind the front wheels. A Type C school bus may have a cutaway truck chassis or truck chassis with cab with or without a left side door and with a GVWR greater than 21,500 pounds.

“Type D school bus,” also known as a rear engine or front engine transit-style school bus, means a school bus constructed utilizing a stripped chassis. The entrance door is ahead of the front wheels.

“Van” means a covered or enclosed truck.

“Wheelchair” means a mobility aid consisting of a frame, seat, and three or four wheels, which is used to support and carry a disabled passenger.

“Wheelchair lift” means an electric hydraulic mechanism and platform in a school bus used to raise and lower a passenger in a wheelchair.

“Wheelchair-lift platform” means a horizontal surface upon which a wheelchair sits while being raised or lowered.

“Wheelchair-passenger restraint” means a combination of a pelvic and an upper torso restraint, including buckles and fasteners, designed to secure a passenger in a wheelchair within a school bus.

“Wheelchair-passenger restraint anchorage” means equipment for fastening wheelchair-passenger restraints to the interior of a school bus.

“Wheelchair-securement anchorage” means equipment for fastening a wheelchair-securement device to a school bus floor.

“Wheelchair-securement device” means a strap or webbing, including buckles and fasteners, used for fastening a wheelchair to a wheelchair-securement anchorage.

“Wheelchair-securement system” means components used to fasten a wheelchair to the interior of a school bus, including a wheelchair-securement anchorage and a wheelchair-securement device.

R13-13-102. Certification of School Bus Drivers

- A.** Certification requirements: An individual shall not operate a school bus in Arizona without being certified by the Department. An applicant for certification shall:
1. Be a minimum of 18 years of age;
 2. Possess a valid identity verified fingerprint clearance card.

- ~~2.3.~~ Submit all of the following to the Department through the employer:
- ~~a.~~ ~~A completed fingerprint card and fingerprint card processing fee.~~
 - ~~b.~~a. An application signed and dated by the applicant that states the applicant's:
 - i. Name, home address, and home phone number;
 - ii. Any alias ever used by the applicant;
 - iii. Social Security number;
 - iv. Date of birth;
 - v. Arizona commercial driver license number;
 - vi. Date of previous application for certification, if any;
 - vii. Intended employer's name;
 - viii. Convictions for a felony or misdemeanor, if any, in this state or any other state; ~~and~~
 - ix. Total points accumulated against the applicant's driving record during the two years immediately preceding the date of application using the point system contained in A.A.C. R17-4-404; and
 - x. Identity verified fingerprint clearance card number.
 - ~~e.~~b. Completed physical examination form, completed physical performance test form, and results of controlled substances testing; and
 - ~~d.~~c. A verification made under penalty of perjury that all submitted information is true and complete;
- ~~3.4.~~ Possess a current Arizona commercial driver license under A.R.S. § 28- 3101;
- ~~4.5.~~ Possess any Arizona driver license endorsement required under A.R.S. § 28-3103;
- ~~5.6.~~ Meet the driving record requirements listed in this Article; and
- ~~6.7.~~ Complete the training requirements listed in this Article.

B. Physical examination

1. An applicant or school bus driver shall submit to a physical examination that is conducted by a health care professional in accordance with the physical examination form. An applicant or school bus driver is qualified to be certified as a school bus driver only if the health care professional conducts the physical examination in accordance with the physical examination form and concludes that the applicant or school bus driver has no condition that would interfere with the applicant's or school bus driver's ability to:
 - a. Operate a school bus safely,
 - b. Evacuate a school bus during an emergency or during a drill required under R13-13-104(D), and
 - c. Perform the operations checks required under R13-13-108(D).
2. An applicant or school bus driver who is insulin dependent shall obtain the waiver described in A.A.C. R17-5-208.
3. An applicant shall submit the completed physical examination form and, if applicable, a copy of the waiver required under subsection (B)(2), to the Department through the employer.
4. The initial physical examination of an applicant, conducted in accordance with the physical examination form, expires 24 months from the date of the physical examination unless a shorter time is specified by the health care professional who administers the physical examination. A school bus driver shall submit to a physical examination before the expiration date of the previous physical examination and send the completed physical

examination form to the Department through the employer before the end of the month in which the previous physical examination expires.

5. If a health care professional determines that further testing of an applicant or school bus driver is needed by an ophthalmologist or optometrist, the health care professional shall refer the applicant or school bus driver to:
 - a. An ophthalmologist licensed under A.R.S. § 32-1401 et seq.,
 - b. An optometrist licensed under A.R.S. § 32-1701 et seq.,
 - c. An ophthalmologist licensed to practice ophthalmology or optometrist licensed to practice optometry by a state contiguous to Arizona, or
 - d. An ophthalmologist licensed to practice ophthalmology or optometrist licensed to practice optometry by any state or territory of the United States and employed by the United States government.
6. In addition to the physical examinations required by this Article, the Department or the employer may require a physical examination of an applicant or school bus driver for an impairment that would affect the ability to perform the activities listed in subsection (B)(1). The Department or employer shall base its decision to require an additional physical examination upon consideration of the appearance or actions of the applicant or school bus driver or of medical information received by the Department regarding the applicant or school bus driver. The applicant or school bus driver shall submit results of a physical examination conducted under this subsection to the Department through the employer within 30 days of the date of the physical examination.

C. Controlled substances and alcohol testing

1. An applicant or school bus driver shall submit to alcohol and controlled substances testing as required by A.R.S. § 28-3228(C)(2) and as prescribed by this Article and 49 CFR 382 October 2006 (no later amendments or editions). The testing shall be conducted in accordance with the procedures at 49 CFR 40 October 2006 (no later amendments or editions), both published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference and on file with the Department, except for the changes in 49 CFR 40 and 49 CFR 382 listed in subsections (C)(1)(a) through (C)(1)(i).
 - a. 49 CFR 40.3
 - i. “Employee,” means an applicant or a school bus driver as defined at R13-13-101.
 - ii. “Employer” has the same meaning as at R13-13-101.
 - b. 49 CFR 382.107
 - i. “Commercial motor vehicle” has the same meaning as at A.R.S. § 28-3001(3).
 - ii. “Driver” means a school bus driver as defined at R13-13-101.
 - iii. “Employer” has the same meaning as at R13-13-101.
 - iv. “Performing a safety-sensitive function” means any time during which a school bus driver is on-duty except when the school bus driver is being compensated by an entity other than the employer.
 - v. “Safety-sensitive function” means any activity for which a school bus driver is on-duty except when the school bus driver is performing an activity for and being compensated by an entity other than the employer.
 - c. 49 CFR 382.207. In both sentences, the word “four” is changed to “eight.”
 - d. 49 CFR 382.301(b), (c), and (d): Delete these subsections.

- e. 49 CFR 382.303(a) and (b): Change the word “occurrence” to “accident,” as defined in R13-13-101, and delete the words “operating on a public road in commerce.”
 - f. 49 CFR 382.303(a)(1) and (b)(1): Delete the words “, if the accident involved the loss of human life”
 - g. 49 CFR 382.303(a)(2) and (b)(2): Delete the words “, if the accident involved:”
 - h. 49 CFR 382.303(a)(2)(i) and (ii) and (b)(2)(i) and (ii): Delete these subsections.
 - i. 49 CFR 382.303(c): In the table, in the column headed “Test must be performed by employer,” change “No” to “Yes.”
2. In addition to the testing required by 49 CFR 382, an applicant shall submit to testing for the use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene by a procedure that is generally accepted in the scientific community to be accurate and reliable.
 3. In addition to the testing required by 49 CFR 382, a school bus driver shall submit annually to testing for the use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene by a procedure that is generally accepted in the scientific community to be accurate and reliable.
 4. The employer shall ensure that a school bus driver is tested for use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, or propoxyphene or alcohol when required to do so by these rules or when requested by the Department.
 5. The employer shall submit any and all negative results of testing done under subsection (C) to the Department within 30 days of the date of testing or within 12 months of the school bus driver's previous test, whichever is sooner, by providing the Department a copy of the report submitted to the employer by the entity that conducted the testing.
 6. The employer shall immediately notify the Department by telephone of any and all positive results of testing done under subsection (C) and shall submit to the Department within five days a copy of the report submitted to the employer by the entity that conducted the testing.

D. Physical performance test

1. An applicant shall pass a physical performance test that consists of the following eight standards:
 - a. Climbing and descending the steps of a school bus three times in 30 seconds;
 - b. Alternately activating the throttle and the service-brake system of a school bus 10 times in 10 seconds;
 - c. Depressing and holding the clutch, if applicable, and service-brake system of a school bus for three seconds, five consecutive times;
 - d. Opening and closing a manually operated service door three times without stopping. If the school bus has an automatic service door, operate the manual override of the service door;
 - e. Operating at least two hand controls, one on each side of the steering wheel, within eight seconds while maintaining control of a moving school bus;
 - f. Starting in a seat-belted position, exit a school bus from the rear-most floor-level emergency exit within 20 seconds;
 - g. Carrying or dragging a 125-pound object 30 feet in 30 seconds; and

- h. Lowering a 30-pound object from a floor-level emergency exit to the ground and lifting the same object from the ground to the school bus floor.
2. A school bus driver who is certified on the effective date of this subsection shall pass the physical performance test within one year from the effective date of this subsection.
3. A school bus driver shall pass the physical performance test again no later than 24 months after previously passing the physical performance test.
4. An applicant or school bus driver who fails the physical performance test may take the test again after 24 hours. An applicant or school bus driver may take the physical performance test no more than three times in 90 days. If an applicant fails the physical performance test on the third attempt, the Department shall not further consider the applicant for certification unless the applicant complies again with the requirements of this Section.
5. The employer shall ensure that a school bus driver who fails the physical performance test does not operate a school bus until the school bus driver passes the physical performance test.
6. If a school bus driver takes and fails the physical performance test three times, the Department shall cancel the school bus driver's certification.
7. An employer shall ensure that the physical performance test is administered by a person who has completed Department-authorized training, using the largest type of school bus that an applicant or school bus driver may be required to operate.
8. A person who administers the physical performance test shall either pass or fail the applicant or school bus driver taking the test, complete the physical performance test form, and submit the completed form to the Department and the employer within seven days of the physical performance test.

E. Driving record

1. During the 24 months before the date of application or during any 24-month period while certified as a school bus driver, an applicant or school bus driver shall not accumulate eight or more points against a driving record in this state using the point system contained in A.A.C. R17-4-404.
2. During the 10 years before the date of application, an applicant shall not have repeatedly received citations for violation of traffic law.

F. Training requirements of a school bus driver

1. Before being certified by the Department as a school bus driver, an applicant shall complete a minimum of 14 hours of classroom training in the following:
 - a. State and federal traffic laws,
 - b. Behind-the-wheel driving operations,
 - c. School bus driver's responsibilities to passengers and school,
 - d. Inspections and operations checks,
 - e. Records and reports,
 - f. Special needs transportation, and
 - g. Accidents and emergencies.
2. An employer shall ensure that classroom training is taught by a classroom instructor who is qualified under R13-13-103.
3. At least seven days before classroom training, the classroom instructor shall notify the Department in writing of the date, time, and location of classroom training. The

classroom instructor shall notify the Department by any means available at least 24 hours before the date, time, or location of classroom training is changed or canceled.

4. After completion of classroom training, the classroom instructor shall administer to the applicant a written examination standardized by the Department.
 - a. The written examination shall consist of a combination of 50 true or false, multiple choice, and fill-in-the-blank questions. The examination questions shall cover the topics listed in subsection (F)(1).
 - b. Each question has a value of two points. To pass the examination an applicant shall receive a score that equals or exceeds 80% of the total possible score.
 - c. If an applicant is unable to read or speak English, the employer shall arrange to have the examination administered orally to the applicant in the language with which the applicant is most familiar.
 - d. If an applicant does not pass the examination on the first attempt, the applicant may take an examination two more times within 12 months of the first attempt. A different examination shall be administered to an applicant who is taking an examination for the second or third time. The period between examinations shall be a minimum of 24 hours. If the applicant fails the examination on the third attempt, the applicant shall be considered further only if the applicant complies again with the requirements in this Section.
5. The classroom instructor shall submit the following information in a written report to the Department and the employer within seven days from the date of the conclusion of a classroom training course:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of training,
 - d. Location of training,
 - e. Number of hours of training taught by the classroom instructor,
 - f. Each applicant's name, and
 - g. Each applicant's examination score.
6. In addition to the report required under subsection (F)(5), the classroom instructor shall maintain and submit to the employer within seven days from the conclusion of a classroom training course, a classroom-training course log that includes:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of the training course,
 - d. Name of each applicant attending the training course,
 - e. Subject matter taught in each hour, and
 - f. Which hours of training were attended by each applicant.
7. In addition to the classroom training, an applicant shall complete behind-the-wheel training consisting of a minimum of 20 hours operating a school bus in Arizona.
 - a. An employer shall ensure that behind-the-wheel training is taught by a behind-the-wheel instructor who is qualified under R13-13-103.
 - b. During behind-the-wheel training, a behind-the-wheel instructor shall be present and observing the applicant while the applicant is operating the school bus.

- c. The employer shall ensure that no one except the applicant, behind-the-wheel instructor, employer, and Department employees are aboard the school bus while the applicant actually operates the school bus.
- d. The behind-the-wheel instructor shall maintain and submit to the employer within seven days from the conclusion of the applicant's behind-the-wheel training, a behind-the-wheel training log that includes:
 - i. Instructor's name,
 - ii. Instructor's identification number,
 - iii. Applicant's name,
 - iv. Date of each behind-the-wheel training session, and
 - v. Actual number of hours at each training session that the applicant operates a school bus.
- e. At the conclusion of behind-the-wheel training, the behind-the-wheel instructor shall use a copy of the Proof of Completion of Behind-the-wheel Training and Driving Test form to administer to the applicant the driving test described on the form. The driving test shall measure the applicant's ability to operate a school bus safely and in a manner consistent with state law. The behind-the-wheel instructor shall either pass or fail the applicant and submit the completed form to the Department and the employer within seven days of the driving test.

G. First aid and cardiopulmonary resuscitation

- 1. Before being certified, an applicant shall complete classroom instruction in cardiopulmonary resuscitation and basic first aid. The instruction in cardiopulmonary resuscitation shall include performing cardiopulmonary resuscitation on adults, children, and infants.
- 2. The instruction shall be conducted by an individual currently certified as an instructor in first aid and cardiopulmonary resuscitation by a program approved by a nationally recognized organization such as the American Heart Association, American Red Cross, National Safety Council, American Safety and Health Institute, or Arizona Bureau of Mines; by an emergency medical technician licensed in Arizona; or by an agency of the U.S. government.
- 3. An applicant shall submit to the Department, through the employer, a copy of the front and back of the first-aid card and cardiopulmonary resuscitation card issued to the applicant or other written documentation as proof of completion of the first-aid and cardiopulmonary resuscitation training.
- 4. A school bus driver shall renew first-aid and cardiopulmonary resuscitation training before expiration of the current training. Renewal instruction shall be provided by an individual described in subsection (G)(2). The school bus driver shall submit to the Department, through the employer, a copy of the front and back of the first-aid card and cardiopulmonary resuscitation card or other written documentation as proof of renewal of training.

H. The Department shall process an application for certification as a school bus driver under R13-13-109.

I. Refresher training

1. A school bus driver shall have refresher training no later than 24 months following completion of the training required by subsection (F). Refresher training shall consist of a minimum of 6 1/2 hours of classroom training in the topics listed in subsection (F)(1).
2. After completing the first refresher training, the school bus driver shall complete a minimum of 6 1/2 hours of classroom training in the topics listed in subsection (F)(1) every 24 months following the last refresher training.
3. An employer shall ensure that refresher training is taught by a classroom instructor who is qualified under R13-13-103.
4. A classroom instructor shall teach refresher training and shall submit the following information in a written report to the Department and the employer within seven days from completion of the refresher training:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of training,
 - d. Location of training,
 - e. Number of hours of training taught by the classroom instructor,
 - f. Each school bus driver's name, and
 - g. Each school bus driver's certification number.
5. In addition to the report required under subsection (I)(4), the classroom instructor shall maintain and submit to the employer within seven days from the conclusion of a refresher training course, a refresher-training course log that includes:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of the refresher training course,
 - d. Name and certification number of each school bus driver attending the refresher training course,
 - e. Subject matter taught in each hour, and
 - f. Which hours of refresher training were attended by each school bus driver.

J. Records

1. The employer shall maintain qualification and training records of an applicant who is certified and of a school bus driver who terminates employment, and qualification records of an applicant who is denied certification, for 24 months from the date of certification, termination of employment, or denial of certification.
2. The employer shall maintain records of testing required under subsection (C) in accordance with 49 CFR 382.401, October 2006 (no later amendments or editions), published at the U. S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference, and on file with the Department. In this subsection, "controlled substances," as used in 49 CFR 382.401, means marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene.
3. The employer shall transfer the records of a school bus driver to a subsequent employer upon written request by the subsequent employer or school bus driver.
4. Qualification records include:
 - a. Application,
 - b. Driving record,

- c. Copy of physical examination form, and
 - d. Physical performance test form.
5. Training records include:
- a. A copy of the classroom-training course log required under subsection (F)(6) that shows the applicant's attendance,
 - b. A copy of the refresher-training course log required under subsection (I)(5) that shows the school bus driver's attendance,
 - c. The classroom training examination score,
 - d. The applicant's behind-the-wheel training log,
 - e. The Proof of Completion of Behind-the-wheel Training and Driving Test form,
 - f. A copy of the first-aid card and cardiopulmonary resuscitation card or other written documentation of completion of first-aid and cardiopulmonary resuscitation training, and
 - g. A copy of the school bus driver certification card issued by the Department.

K. Denial, cancellation, or suspension of certificate

1. Based on an assessment of the totality of the circumstances, the Department may deny a certificate to an applicant or may cancel or suspend a certificate of a school bus driver for:
- a. Failing to meet or comply with the requirements of this Article;
 - b. Being convicted of or subject to an outstanding warrant for any felony;
 - c. Being convicted of or subject to an outstanding warrant for any misdemeanor reasonably related to the occupation of a school bus driver including, but not limited to:
 - i. Citation for any moving motor vehicle violation, including but not limited to, violations of A.R.S. § 28-1591 et seq.;
 - ii. Driving under the influence (A.R.S. § 28-1381 et seq.);
 - iii. Any sexual offense (A.R.S. § 13-1401 et seq.);
 - iv. Any abuse of a child (A.R.S. § 13-3623); or
 - v. Use, sale, or possession of a controlled substance (A.R.S. § 13-3401 et seq.).
 - d. Demonstrating behavior that endangers the educational welfare or personal safety of students, teachers, or school bus drivers or other co-workers;
 - e. Providing false, incomplete, or misleading information to the Department;
 - f. Driving or being in actual physical control of a school bus under a circumstance listed in A.R.S. § 28-1381(A);
 - g. Under A.R.S. §§ 28-3301 through 28-3322, having a commercial driver license canceled, suspended, revoked, or denied; or
 - h. Having a verified positive result to any controlled substance or alcohol test required by subsections (C)(1), (2), or (3), at any time.
2. The Department shall cancel or suspend a certificate of a school bus driver for:
- a. Having a fingerprint clearance card that is invalid, suspended, canceled or revoked pursuant to A.R.S. § 28-3228 and A.R.S. Title 41, Chapter 12, Article 3.1; or
 - b. Operating a school bus in violation of A.R.S. § 41-1758.03(D) or A.R.S. § 41-1758.07(D) which preclude a person from driving any vehicle to transport employees or clients of the employer as part of the person's employment including students, teachers or other co-workers.

23. Any conviction, violation, warrant, or other misconduct described in this Section shall be considered, whether or not the school bus driver was operating a school bus at the time of the conviction, violation, warrant, or other misconduct.
 34. An applicant who is denied a certificate or a school bus driver whose certificate is canceled or suspended may request a hearing within 30 days from the date of receipt of the notice of the denial, cancellation, or suspension. The hearing shall be conducted according to the procedures contained in A.R.S. Title 41, Chapter 6, Article 10.
 45. The Department shall inform an applicant who is denied a certificate or a school bus driver whose certificate is canceled or suspended of the amount of time that must elapse before the applicant or the school bus driver may reapply for certification. The Department shall include this information in the notice of denial, cancellation, or suspension and the notice of final order, if any, served on the applicant or school bus driver. In determining the amount of time that must elapse before reapplication, the Department shall consider:
 - a. The seriousness of the offense leading to denial, cancellation, or suspension;
 - b. The frequency with which the offense occurred; and
 - c. The amount of time required to correct the offense.
- L. If a school bus driver is terminated from or leaves employment, the employer shall provide written notice to the Department within 30 days of the termination or leaving. If a school bus driver transfers employment from one employer to a second employer, within 14 days of the transfer the second employer shall provide written notice to the Department of the:
1. School bus driver's name,
 2. School bus driver's certification number,
 3. Name of the transferring employer, and
 4. Effective date of the transfer.

Economic, Small Business and Consumer Impact Statement
ARS §41-1055

School Bus Rulemaking
December 2017

Preamble:

1. An identification of the proposed rulemaking, including all of the following:

Under A.R.S. § 28-900(A), the Department of Public Safety, in consultation with the School Bus Advisory Council, establishes minimum standards to improve the safety and welfare of school bus passengers. The Department also establishes minimum standards for certification as a school bus driver pursuant to A.R.S. § 28-3228. The rules are enforced by the Department.

The Department intends to amend R13-13-101 and R13-13-102 for the purpose of updating the language relating to recently signed House Bill 2247, which eliminated the need for school bus driver applicants to submit processing fees and a full set of fingerprints to the Department for the purpose of obtaining a state and federal criminal records check pursuant to A.R.S. § 41-1750 and Public Law 92-544. Effective August 8, 2017, and in accordance with A.R.S. § 28-3228, additional language requiring an identity verified fingerprint clearance card to become a certified school bus driver needs to be added to the text of the rule.

(a) The conduct and its frequency of occurrence that the rule is designed to change.

R13-13-101 and R13-13-102

The rule amendments are intended to address the updated legislative language contained in A.R.S. § 28-3228; which requires identity verified fingerprint clearance cards for new school bus drivers after August 8, 2017, and for all existing active schools bus drivers after December 31, 2018.

There are currently 7,856 school bus drivers in Arizona that will need to obtain or maintain existing fingerprint clearance cards. Additionally, the Department currently certifies an annual average of 1,176 new bus drivers each year.

(b) The harm resulting from the conduct the rule is designed to change and the likelihood it will continue to occur if the rule is not changed.

After August 8, 2017, the language in A.A.C. R13-13-101 and R13-13-102 will not be consistent with the updated legislative changes to A.R.S. § 28-3228; which will require identity verified fingerprint clearance cards for all school bus drivers.

(c) The estimated change in frequency of the targeted conduct expected from the rule change.

The R13-13-101 and R13-13-102 rule amendments will provide consistency in language and eliminate the discrepancy between rule and state statute.

2. A brief summary of the information included in the economic, small business and consumer impact statement.

The Department intends to amend R13-13-101 and R13-13-102 for the purpose of updating the language relating to recently signed House Bill 2247; which eliminated the need for school bus driver applicants to submit processing fees and a full set of fingerprints to the Department for the purpose of obtaining a state and federal criminal records check pursuant to A.R.S. § 41-1750 and Public Law 92-544. Effective August 8, 2017, and in accordance with A.R.S. § 28-3228, additional language requiring an identity verified fingerprint clearance card to become a certified school bus driver needs to be added to the text of the rule.

Under the current rule, all school bus drivers undergo a background check at a cost of \$22 per application, which is now outdated. There are approximately 7,856 bus drivers statewide with an approximate average annual new driver application rate of 1,178. As a result of new legislation, all existing and new school bus drivers will be required to obtain an identity verified fingerprint clearance card. The cost to obtain an identity verified fingerprint clearance card is \$67, which is valid for six years. The Department assesses a \$67 fee under A.R.S. § 15-106 for every clearance card application and renewal. The \$67 is derived from the following: \$15 is deposited into the Records Processing Fund to pay for the initial state criminal history check (A.R.S. §. 41-1750(J)); \$10 is allocated to the FBI for the federal criminal history check; \$35 is deposited into the Fingerprint Clearance Card Fund (A.R.S. § 41-1758.06) for the administration of the fingerprint clearance card program; and, \$7 is distributed to the Board of Fingerprinting Fund (A.R.S. § 41-619.56) to fund their operations.

The Department estimates there are approximately 5,971 existing school bus drivers that will need to obtain an identity verified fingerprint clearance card by December 31, 2018. The cost associated with the identity verified fingerprint clearance card will be the responsibility of the school bus driver applicants, school districts, and private transportation providers.

3. If the economic, small business and consumer impact summary accompanies a proposed rule, the name and address of agency employees who may be contacted to submit or request additional data

on the information included in the economic, small business and consumer impact statement.

Name: Lance Larson, Sergeant
Address: Arizona Department of Public Safety
Student Transportation Unit, Mail Drop 1240
P.O. Box 6638
Phoenix, AZ 85005-6638
Telephone: (602) 223-2522
E-mail: LLarson@azdps.gov

The economic, small business and consumer impact statement:

1. An identification of the proposed rulemaking.

The Department intends to amend R13-13-101 and R13-13-102 for the purpose of updating the language relating to recently signed House Bill 2247, which eliminated the need for school bus driver applicants to submit processing fees and a full set of fingerprints to the Department for the purpose of obtaining a state and federal criminal records check pursuant to A.R.S. § 41-1750 and Public Law 92-544. Effective August 8, 2017, and in accordance with A.R.S. § 28-3228, additional language requiring an identity verified fingerprint clearance card to become a certified school bus driver needs to be added to the text of the rule.

2. An identification of the persons who will be directly affected by, bear the costs of or directly benefit from the proposed rulemaking.

Persons or entities directly affected by, bearing the costs of, or directly benefiting from the rulemaking includes the following:

- Arizona school districts
- Arizona Department of Public Safety, Applicant Clearance Card Team
- School bus drivers
- Arizona Board of Fingerprinting
- Private school bus companies

3. Cost benefit analysis of the following:

- a. **The probable costs and benefits to the implementing agency and other agencies directly affected by the implementation and enforcement of the proposed rulemaking. The probable costs to the implementing agency shall include the number of new full-time employees necessary to implement and enforce the proposed rule. The preparer of the economic, small business and consumer impact statement shall notify the joint legislative budget committee of the number of new full-time employees necessary to implement and enforce the rule before the rule is approved by the council.**

Under the current rule, all bus drivers undergo a background check at a cost of \$22 per application, which is now outdated. There are approximately 7,856 bus drivers statewide with an approximate average annual new driver application rate of 1,178. As a result of new legislation, all existing and new school bus drivers will be required to obtain an identity verified fingerprint clearance card. The cost to obtain a fingerprint clearance card is \$67, which is valid for six years. The Department assesses a \$67 fee under A.R.S. § 15-106 for every clearance card application and renewal. The \$67 is derived from the following: \$15 is deposited into the Records Processing Fund to pay for the initial state criminal history check (A.R.S. § 41-1750(J)); \$10 is allocated to the FBI for the federal criminal history check; \$35 is deposited into the Fingerprint Clearance Card Fund (A.R.S. § 41-1758.06) for the administration of the fingerprint clearance card program; and, \$7 is distributed to the Board of Fingerprinting Fund (A.R.S. § 41-619.56) to fund their operations.

The Department anticipates the \$67 fee will support the proposed amendments without the need for additional full-time employees.

The Department estimates an average annual new school bus driver application rate of 1,178. The increased identity verified fingerprint clearance card caseload would result in annual fingerprint clearance card application revenues of \$78,926.

The \$67 fee will be offset by the \$22 fee already required for each background check under the current rule resulting in a net fee increase of \$45; which would result in a total new fingerprint clearance card annual revenue of \$53,000.

Of the \$78,926, \$17,670 would be deposited into the Records Processing Fund for the initial state criminal history check, \$11,780 would be deposited into the FBI fund for federal criminal history checks, \$41,230 would be allocated to the Fingerprint Clearance Card Fund for the administration of the clearance card program, and \$8,246 would be deposited into the Board of Fingerprinting Fund for operating costs.

The Board of Fingerprinting estimates there will be additional good-cause exemption hearings for identity verified fingerprint clearance cards, however, it is unknown what the overall impact on the board will be. The Board believes the additional revenues to their fund will be sufficient to cover any new costs.

- b. The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the proposed rulemaking.**

The school districts in Arizona will incur minimal costs if the employer elects to cover the fee. Generally, fees associated with fingerprint clearance cards are the responsibility of the applicant; however, some school districts may elect to assist the applicant with the fee.

- c. The probable costs and benefits to businesses directly affected by the proposed rulemaking, including any anticipated effect on the revenues or payroll expenditure of employers who are subject to the proposed rulemaking.**

Businesses are indirectly affected by the rule change; but could have a minimal economic impact relating to R13-13-101 and R13-12-102. Business impact is expected to be minimal for private transportation providers that employ school bus drivers who are required to obtain a valid identity verified fingerprint clearance card.

- 4. A general description of the probable impact on private and public employment in businesses, agencies and political subdivisions of this state directly affected by the proposed rulemaking.**

There should be minimal impact, if any, on public employment in state, county, municipal or other political agencies or subdivisions directly affected by this rulemaking. Certain school bus drivers may have their certificates denied, canceled, or revoked as a result of the Governor's and Legislature's intent to pass House Bill 2247 amending A.R.S. §§ 28-3228, 41-619.51, 41-1758 and 41-1758.01. There should be no impact on employment of other school district personnel. School districts and private companies hiring school bus drivers may see a minimal increase in costs, should they be required to hire and/or train additional school bus drivers to replace those who have had their certificates denied, suspended or revoked as a result of the statutes and rules changes.

- 5. A statement of the probable impact of the proposed rulemaking on small businesses. The statement shall include:**

- a. **An identification of the small business subject to the proposed rulemaking.**

Amendments to R13-13-101 and R13-13-102 may have a minimal economic impact on small businesses that provide student transportation for school districts. The minimal impact would only be realized if the businesses decides to pay the fingerprint clearance card fee, which would normally be paid for by the applicant or the business loses the employee because the employee's certification was suspended or revoke under statute requiring a new employee to be hired and trained.

- b. **The administrative and other costs required for compliance with the proposed rulemaking.**

The Department anticipates small businesses will incur minimal administrative or other costs as a result of these rule amendments.

- c. **A description of the methods prescribed in section 41-1035 that the agency may use to reduce the impact on small businesses with reasons for the agency's decision to use or not to use each method.**

There are no means to reduce the impact on small business due to the statutory requirements for the school bus driver to have a valid identity verified fingerprint clearance card. The Department is not able to control the fee from the FBI and Board of Fingerprinting. Internally, the Department believes it is currently charging fees that are appropriate to maintain current service levels.

- d. **The probable cost and benefit to private persons and consumers who are directly affected by the proposed rulemaking.**

The rules require private persons applying for a school bus driver certification to pay a \$22 fee for background checks and processing. Under the new statutory changes, private persons are required to obtain an identity verified fingerprint clearance card for a fee of \$67, which results in a net increase of \$45. While this is an increase, the increase is a result of statutory requirements for an identity verified fingerprint clearance card which involves other units and statutory funds in the Department. For some persons, as outlined above, their employer may in some cases absorb the fee.

6. **A statement of the probable effect on state revenues.**

The Department estimates an average annual new school bus driver application rate of 1,178. The increased fingerprint clearance card caseload would result in annual fingerprint clearance card application revenues of \$78,926. This would be offset by the \$22 fee required for each background check per the current rule, which would result in a total new fingerprint clearance card annual revenue of \$53,000. Of the \$78,926, \$17,670 would be deposited into the Records Processing Fund for the initial state criminal history check, \$11,780 would be deposited into the FBI Fund for federal criminal history checks, \$41,230 would be allocated to the Fingerprint Clearance Card Fund for the administration of the clearance card program, and \$8,246 would be deposited into the Board of Fingerprinting Fund for operating costs.

7. **A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed rulemaking, including the monetizing of the costs and benefits for each option and providing the rationale for not using non-selected alternatives.**

There are no less intrusive or less costly alternatives for achieving the purpose of the rulemaking due to the statutory requirement for the school bus driver to now possess a valid identity verified fingerprint clearance card.

8. **A description of any data on which a rule is based with a detailed explanation of how the data was obtained and why the data is acceptable data. An agency advocating that any data is acceptable data has the burden of proving that the data is acceptable. For the purposes of this paragraph, "acceptable data" means empirical, replicable and testable data as evidenced in supporting documentation, statistics, reports, studies or research.**

The rulemaking is not based on any review of data. The rulemaking is based on a statutory requirement that school bus drivers now possess a new identity verified fingerprint clearance card.

TITLE 13. PUBLIC SAFETY
CHAPTER 13. DEPARTMENT OF PUBLIC SAFETY
SCHOOL BUSES

ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

Section

- R13-13-101. Definitions
- R13-13-102. Certification of School Bus Drivers
- R13-13-103. Qualification of Classroom and Behind-the-wheel Instructors
- R13-13-104. Minimum Standards for School Bus Operation
- R13-13-105. Special Needs Standards
- R13-13-106. Minimum Standards for School Bus Chassis
- R13-13-107. Minimum Standards for School Bus Body
- R13-13-108. Inspection, Maintenance, and Alterations
- R13-13-109. Time-frames for Making Certification Determinations
- R13-13-110. First-aid Equipment
- R13-13-111. Rehearing or Review of Decision
- R13-13-112. Enforcement Audits

ARTICLE 2. MINIMUM STANDARDS FOR SCHOOL BUSES OPERATED ON ALTERNATIVE FUEL

Section

- R13-13-201. Minimum Standards for Compressed Natural Gas Fuel Systems
- R13-13-202. Inspection and Maintenance of Compressed Natural Gas Fuel Systems

ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

R13-13-101. Definitions

In this Chapter, unless otherwise specified:

“Accident” means any unexpected occurrence involving a moving or non-moving school bus that results in any bodily injury or fatality to a passenger or non-passenger, damage to personal or real property outside the school bus, or damage to the school bus that affects the integrity of the school bus or results in a major defect as described in R13-13-108(B).

“Alternately flashing signal lamps” means a system of red or red and amber lamps that are mounted horizontally to both the front and rear of the school bus body and used to inform the public that the school bus is preparing to stop or has stopped to load or unload passengers. Alternately flashing signal lamps can be either a four-lamp system as described in R13-13-107(17)(c)(i) or an eight-lamp system as described in R13-13-9-107(c)(ii).

“Alteration” means any addition, modification, or removal of any equipment or

component after a school bus is inspected by the Department, which may affect the operations of the school bus; compliance with the statutes or rules applicable to school buses; or the health, safety, or welfare of any individual.

“Applicant” means an individual who submits an application to the Department to obtain a certificate to operate a school bus.

“ASE” means National Institute of Automotive Service Excellence.

“Auxiliary fan” means a device mounted inside the school bus body used to supplement the heating, defrosting, or air-conditioning systems by circulating air in the school bus.

“Behind-the-wheel instructor” means an individual qualified under R13-13-103 to provide behind-the-wheel training to applicants.

“Behind-the-wheel training” means the complete physical control of a school bus by an applicant while accompanied by and under direct observation of a behind-the-wheel instructor.

“Belt cutter” means a hand-held instrument containing a blade used to sever a seat belt or a wheelchair-securement device.

“Certificate” means a written authorization issued by the Department to operate a school bus in Arizona.

“Chassis” means the part of a school bus that consists of all base components, including the frame, front and rear suspension, exhaust system, brakes, engine, engine hood or cover, transmission, front and rear axles, front fenders, drive train and shaft, fuel system, engine air intake and filter, clutch and accelerator pedals, steering wheel, tires, heating and cooling system, battery, and controls and instruments to operate the school bus.

“Chassis cowl” means those parts of a Type C school bus that are located in front of the cowl and attached before a school bus manufacturer adds the school bus body.

“Citation” has the same meaning as at A.R.S. § 28-1872.

“Classroom instructor” means an individual qualified under R13-13-103 to provide classroom training to:

Applicants to operate a school bus,

Individuals becoming qualified to teach classroom training,

Individuals becoming qualified to teach techniques of behind-the-wheel training,

or

School bus drivers taking refresher training.

“Classroom training” means the courses required by the Department of an applicant before the applicant is certified or of an individual seeking qualification as a classroom or behind-the-wheel instructor.

“Commercial driver license” has the same meaning as at A.R.S. § 28-3001.

“Controlled substances and alcohol testing” means a determination of an applicant's

or school bus driver's use of marijuana, cocaine, phencyclidine, opiates, amphetamines, and alcohol prescribed by 49 CFR 382, October 2006 (no later amendments or editions), and conducted in accordance with the procedures at 49 CFR 40, October 2006 (no later amendments or editions), both published by the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference, and on file with the Department; and a determination of an applicant's or school bus driver's use of marijuana, cocaine, phencyclidine, opiates, amphetamines, barbiturates, benzodiazepines, methadone, and propoxyphene as required by these rules and conducted in accordance with a procedure that is generally accepted in the scientific community to be accurate and reliable.

“Cowl” means the portion of the chassis in a Type C school bus that separates the school bus engine from the school bus driver’s compartment.

“Cutaway van” means a chassis to which a completed driver's compartment is attached before a school bus manufacturer adds a school bus body.

“dB(A)” means decibels A scale, a term denoting that noise level has been adjusted to duplicate human hearing.

“Driver’s compartment” means the part of a school bus body that is separated from the passenger compartment by a barrier and contains the controls and instruments for the operation of the school bus.

“Emergency-brake system” means mechanical components used to slow or stop a school bus after a failure of the service-brake system.

“Emergency exit” means an opening in a school bus, including a door, push-out window, or roof hatch, used to unload passengers in the event of an occurrence that requires immediate evacuation of the school bus.

“Employer” means a private business or school district that hires applicants and certified school bus drivers to operate school buses.

“Frame” means the structural foundation upon which a school bus chassis is constructed.

“Frontage road” means a street that parallels an interstate highway and furnishes access to streets and property that would otherwise be unreachable from the interstate highway.

“Gross vehicle weight rating” means the value specified by the manufacturer as the maximum total loaded weight of a school bus, calculated in accordance with R13-13-106(27).

“Health care professional” means:

A physician licensed to practice medicine under A.R.S. § 32-1401 et seq., osteopathy under A.R.S. § 32-1800 et seq., or chiropractic under A.R.S. § 32-900 et seq.;

A physician licensed to practice medicine, osteopathy, or chiropractic in a state

contiguous to Arizona;

A physician employed by the United States government and licensed by a state or territory of the United States;

A physician assistant licensed under A.R.S. § 32-2501 et seq.; or

A registered nurse practitioner licensed under A.R.S. § 32-1601 et seq.

“Highway” has the same meaning as at A.R.S. § 28-101.

“Identification” means the signs, lettering, or numbers placed on the interior or exterior of a school bus body, including the glass areas, but does not include the lettering, numbers, or logos of a manufacturer or distributor of the manufacturer's product.

“Ignition power-deactivation switch” means a device that when set causes the engine of a motor vehicle to stop operating if the transmission is placed into gear or the parking-brake system is released.

“Interstate highway” means the designation given by the federal government to the system of highways connecting two or more states of the United States.

“Lamp” means a device that is covered by a lens and used to produce artificial light.

“Major defect” means a condition that exists to the interior or exterior of a school bus that causes the Department or owner to place the school bus out of service while the defect is being corrected.

“Manufacturer” means an entity engaged in the manufacturing or assembling of a school bus chassis, school bus body, or school bus chassis and body.

“Medical practitioner” has the same meaning as at A.R.S. § 32-1901.

“Minor defect” means a condition that exists to the interior or exterior of a school bus that is not a major defect and allows the school bus to remain in operation while the defect is being corrected.

“Off-duty” means the time a school bus driver is not on-duty.

“On-duty” means the period between the time a school bus driver begins to work for the employer or is required to be ready to work for the employer until the time the school bus driver is relieved from work and all responsibility for performing work for the employer. The time on-duty is used only to determine when a school bus driver must be provided time off-duty. Time on-duty may be compensated by the employer or an entity other than the employer or may be uncompensated. On-duty includes:

All time at an employer's place of business, waiting to be dispatched;

All time performing an operations check of a school bus in accordance with R13-13-108, or servicing or conditioning a school bus;

All time driving a school bus, including loading or unloading the school bus, and remaining in readiness to drive a school bus;

All time, at the direction of the employer, travelling but not driving a school bus or assuming any other responsibility to the employer. If the school bus driver is

afforded at least eight consecutive hours off-duty upon arrival at the school bus driver's destination after travelling but not driving a school bus or assuming any other responsibility to the employer, the school bus driver shall be considered off-duty for the entire period travelling but not driving the school bus or assuming any other responsibility to the employer;

All time repairing, obtaining assistance, or remaining in attendance upon a disabled school bus;

All time preparing required reports and records;

All time providing a breath or urine sample, including travel time to and from the collection site, to comply with the testing requirements of this Chapter;

All time performing any other work for the employer; and

All time performing any compensated work for any entity other than the employer.

“Out of service” means a school bus cannot be used to transport passengers.

“Owner” means the public or governmental agency or institution or private company in whose name a school bus is titled.

“Parking-brake system” means mechanical components used to prevent the movement of a school bus while loading or unloading a passenger or when the school bus is parked.

“Passenger” means an individual who rides in a school bus but does not participate in the operation of the school bus.

“Passenger compartment” means that part of the school bus body that is separated from the school bus driver's compartment by a barrier and holds the passengers to be transported.

“Physical examination” means an evaluation of an applicant's or school bus driver's medical status performed by a health care professional according to this Article.

“Physical examination form” means the Arizona Department of Transportation, Motor Vehicle Division, Medical Examination Report, which is used to record the results of a physical examination and may be obtained from the Department or Arizona Department of Transportation, Motor Vehicle Division.

“Physical performance test” means an evaluation of an applicant's or school bus driver's reflexes, agility, and strength performed according to this Article.

“Physical performance test form” means the document used to record the results of a physical performance test and may be obtained from the Department.

“Push-out window” means safety glass enclosed in a frame on a school bus that moves to the outside of the school bus when force is applied to the window from inside the school bus.

“Refresher training” means the courses required by the Department of each school bus driver to maintain certification as a school bus driver in Arizona.

“Restraining barrier” means a structure located in front of any school bus seat that

restricts the forward motion of a passenger.

“Rub rail” means a horizontal steel bar attached to the outside of a school bus body used to reinforce the sides of the school bus.

“Safety glass” has the same meaning as at A.R.S. § 28-959(F).

“School” means a school as defined by A.R.S. § 15-101(19), accommodation school as defined by A.R.S. § 15-101(1), charter school as defined by A.R.S. § 15-101(3), or private school as defined by A.R.S. § 15-101(18).

“School bus” has the same meaning as at A.R.S. § 28-101.

“School bus body” means a structure assembled upon a chassis designed to carry a school bus driver and passengers.

“School bus driver” means an individual who is certified by the Department as meeting the requirements at A.R.S. § 28- 3228 and R13-13-102 to operate a school bus in Arizona.

“School district” has the same meaning as at A.R.S. § 15-101 (20).

“Service-brake system” means mechanical components used to slow or stop a school bus.

“Service door” means a metal structure used to close the opening of a service entrance.

“Service entrance” means an opening in a school bus used to load or unload passengers.

“Special needs school bus” means a school bus that is designed to transport disabled passengers, some of whom may use a wheelchair, and is constructed with a service entrance and a special-service entrance.

“Special-service entrance” means an opening in a school bus that accommodates a wheelchair lift for the loading or unloading of a passenger who uses a wheelchair.

“Special-service entrance door” means a metal structure used to close the opening of a special-service entrance.

“Street” has the same meaning as at A.R.S. § 28-101.

“Traffic control signal” has the same meaning as at A.R.S. § 28-601.

“Training” means the instruction, courses, classes, or workshops provided by the Department or the employer that are required to obtain or maintain certification as a school bus driver or qualification as a classroom or behind-the-wheel instructor, or qualification to administer the physical performance test in Arizona.

“Transport” or “transporting” means a school bus driver sets a school bus in motion to carry passengers or objects authorized by the school district to be carried in a school bus.

“Type A school bus” means a conversion bus constructed utilizing a cutaway front section vehicle with a left side driver's door. This definition includes two

classifications: Type A-1, with a Gross Vehicle Weight Rating (GVWR) of 14,500 pounds or less; and Type A-2, with a GVWR greater than 14,500 pounds and less than or equal to 21,500 pounds.

“Type B school bus” means a school bus constructed utilizing a stripped chassis. The entrance door is behind the front wheels. This definition includes two classifications: Type B-1, with a GVWR of 10,000 pounds or less, and Type B-2, with a GVWR greater than 10,000 pounds.

“Type C school bus,” also known as a conventional style school bus, means a school bus constructed utilizing a chassis with a hood and front fender assembly. The entrance door is behind the front wheels. A Type C school bus may have a cutaway truck chassis or truck chassis with cab with or without a left side door and with a GVWR greater than 21,500 pounds.

“Type D school bus,” also known as a rear engine or front engine transit-style school bus, means a school bus constructed utilizing a stripped chassis. The entrance door is ahead of the front wheels.

“Van” means a covered or enclosed truck.

“Wheelchair” means a mobility aid consisting of a frame, seat, and three or four wheels, which is used to support and carry a disabled passenger.

“Wheelchair lift” means an electric hydraulic mechanism and platform in a school bus used to raise and lower a passenger in a wheelchair.

“Wheelchair-lift platform” means a horizontal surface upon which a wheelchair sits while being raised or lowered.

“Wheelchair-passenger restraint” means a combination of a pelvic and an upper torso restraint, including buckles and fasteners, designed to secure a passenger in a wheelchair within a school bus.

“Wheelchair-passenger restraint anchorage” means equipment for fastening wheelchair-passenger restraints to the interior of a school bus.

“Wheelchair-securement anchorage” means equipment for fastening a wheelchair-securement device to a school bus floor.

“Wheelchair-securement device” means a strap or webbing, including buckles and fasteners, used for fastening a wheelchair to a wheelchair-securement anchorage.

“Wheelchair-securement system” means components used to fasten a wheelchair to the interior of a school bus, including a wheelchair-securement anchorage and a wheelchair-securement device.

R13-13-102. Certification of School Bus Drivers

A. Certification requirements: An individual shall not operate a school bus in Arizona without being certified by the Department. An applicant for certification shall:

1. Be a minimum of 18 years of age;
2. Submit all of the following to the Department through the employer:
 - a. A completed fingerprint card and fingerprint card processing fee;
 - b. An application signed and dated by the applicant that states the applicant's:
 - i. Name, home address, and home phone number;
 - ii. Any alias ever used by the applicant;
 - iii. Social Security number;
 - iv. Date of birth;
 - v. Arizona commercial driver license number;
 - vi. Date of previous application for certification, if any;
 - vii. Intended employer's name;
 - viii. Convictions for a felony or misdemeanor, if any, in this state or any other state; and
 - ix. Total points accumulated against the applicant's driving record during the two years immediately preceding the date of application using the point system contained in A.A.C. R17-4-404;
 - c. Completed physical examination form, completed physical performance test form, and results of controlled substances testing; and
 - d. A verification made under penalty of perjury that all submitted information is true and complete;
3. Possess a current Arizona commercial driver license under A.R.S. § 28- 3101;
4. Possess any Arizona driver license endorsement required under A.R.S. § 28-3103;
5. Meet the driving record requirements listed in this Article; and
6. Complete the training requirements listed in this Article.

B. Physical examination

1. An applicant or school bus driver shall submit to a physical examination that is conducted by a health care professional in accordance with the physical examination form. An applicant or school bus driver is qualified to be certified as a school bus driver only if the health care professional conducts the physical examination in accordance with the physical examination form and concludes that the applicant or school bus driver has no condition that would interfere with the applicant's or school bus driver's ability to:
 - a. Operate a school bus safely,
 - b. Evacuate a school bus during an emergency or during a drill required under R13-13-104(D), and
 - c. Perform the operations checks required under R13-13-108(D).
2. An applicant or school bus driver who is insulin dependent shall obtain the waiver described in A.A.C. R17-5-208.
3. An applicant shall submit the completed physical examination form and, if applicable, a copy of the waiver required under subsection (B)(2), to the

- Department through the employer.
4. The initial physical examination of an applicant, conducted in accordance with the physical examination form, expires 24 months from the date of the physical examination unless a shorter time is specified by the health care professional who administers the physical examination. A school bus driver shall submit to a physical examination before the expiration date of the previous physical examination and send the completed physical examination form to the Department through the employer before the end of the month in which the previous physical examination expires.
 5. If a health care professional determines that further testing of an applicant or school bus driver is needed by an ophthalmologist or optometrist, the health care professional shall refer the applicant or school bus driver to:
 - a. An ophthalmologist licensed under A.R.S. § 32-1401 et seq.,
 - b. An optometrist licensed under A.R.S. § 32-1701 et seq.,
 - c. An ophthalmologist licensed to practice ophthalmology or optometrist licensed to practice optometry by a state contiguous to Arizona, or
 - d. An ophthalmologist licensed to practice ophthalmology or optometrist licensed to practice optometry by any state or territory of the United States and employed by the United States government.
 6. In addition to the physical examinations required by this Article, the Department or the employer may require a physical examination of an applicant or school bus driver for an impairment that would affect the ability to perform the activities listed in subsection (B)(1). The Department or employer shall base its decision to require an additional physical examination upon consideration of the appearance or actions of the applicant or school bus driver or of medical information received by the Department regarding the applicant or school bus driver. The applicant or school bus driver shall submit results of a physical examination conducted under this subsection to the Department through the employer within 30 days of the date of the physical examination.
- C. Controlled substances and alcohol testing
1. An applicant or school bus driver shall submit to alcohol and controlled substances testing as required by A.R.S. § 28-3228(C)(2) and as prescribed by this Article and 49 CFR 382 October 2006 (no later amendments or editions). The testing shall be conducted in accordance with the procedures at 49 CFR 40 October 2006 (no later amendments or editions), both published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference and on file with the Department, except for the changes in 49 CFR 40 and 49 CFR 382 listed in subsections (C)(1)(a) through (C)(1)(i).
 - a. 49 CFR 40.3
 - i. “Employee,” means an applicant or a school bus driver as defined at R13-13-101.
 - ii. “Employer” has the same meaning as at R13-13-101.
 - b. 49 CFR 382.107
 - i. “Commercial motor vehicle” has the same meaning as at A.R.S. §

- 28-3001(3).
- ii. "Driver" means a school bus driver as defined at R13-13-101.
 - iii. "Employer" has the same meaning as at R13-13-101.
 - iv. "Performing a safety-sensitive function" means any time during which a school bus driver is on-duty except when the school bus driver is being compensated by an entity other than the employer.
 - v. "Safety-sensitive function" means any activity for which a school bus driver is on-duty except when the school bus driver is performing an activity for and being compensated by an entity other than the employer.
- c. 49 CFR 382.207. In both sentences, the word "four" is changed to "eight."
 - d. 49 CFR 382.301(b), (c), and (d): Delete these subsections.
 - e. 49 CFR 382.303(a) and (b): Change the word "occurrence" to "accident," as defined in R13-13-101, and delete the words "operating on a public road in commerce."
 - f. 49 CFR 382.303(a)(1) and (b)(1): Delete the words ", if the accident involved the loss of human life"
 - g. 49 CFR 382.303(a)(2) and (b)(2): Delete the words ", if the accident involved:"
 - h. 49 CFR 382.303(a)(2)(i) and (ii) and (b)(2)(i) and (ii): Delete these subsections.
 - i. 49 CFR 382.303(c): In the table, in the column headed "Test must be performed by employer," change "No" to "Yes."
- 2. In addition to the testing required by 49 CFR 382, an applicant shall submit to testing for the use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene by a procedure that is generally accepted in the scientific community to be accurate and reliable.
 - 3. In addition to the testing required by 49 CFR 382, a school bus driver shall submit annually to testing for the use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene by a procedure that is generally accepted in the scientific community to be accurate and reliable.
 - 4. The employer shall ensure that a school bus driver is tested for use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, or propoxyphene or alcohol when required to do so by these rules or when requested by the Department.
 - 5. The employer shall submit any and all negative results of testing done under subsection (C) to the Department within 30 days of the date of testing or within 12 months of the school bus driver's previous test, whichever is sooner, by providing the Department a copy of the report submitted to the employer by the entity that conducted the testing.
 - 6. The employer shall immediately notify the Department by telephone of any and all positive results of testing done under subsection (C) and shall submit to the Department within five days a copy of the report submitted to the employer by the entity that conducted the testing.
- D. Physical performance test

1. An applicant shall pass a physical performance test that consists of the following eight standards:
 - a. Climbing and descending the steps of a school bus three times in 30 seconds;
 - b. Alternately activating the throttle and the service-brake system of a school bus 10 times in 10 seconds;
 - c. Depressing and holding the clutch, if applicable, and service-brake system of a school bus for three seconds, five consecutive times;
 - d. Opening and closing a manually operated service door three times without stopping. If the school bus has an automatic service door, operate the manual override of the service door;
 - e. Operating at least two hand controls, one on each side of the steering wheel, within eight seconds while maintaining control of a moving school bus;
 - f. Starting in a seat-belted position, exit a school bus from the rear-most floor-level emergency exit within 20 seconds;
 - g. Carrying or dragging a 125-pound object 30 feet in 30 seconds; and
 - h. Lowering a 30-pound object from a floor-level emergency exit to the ground and lifting the same object from the ground to the school bus floor.
2. A school bus driver who is certified on the effective date of this subsection shall pass the physical performance test within one year from the effective date of this subsection.
3. A school bus driver shall pass the physical performance test again no later than 24 months after previously passing the physical performance test.
4. An applicant or school bus driver who fails the physical performance test may take the test again after 24 hours. An applicant or school bus driver may take the physical performance test no more than three times in 90 days. If an applicant fails the physical performance test on the third attempt, the Department shall not further consider the applicant for certification unless the applicant complies again with the requirements of this Section.
5. The employer shall ensure that a school bus driver who fails the physical performance test does not operate a school bus until the school bus driver passes the physical performance test.
6. If a school bus driver takes and fails the physical performance test three times, the Department shall cancel the school bus driver's certification.
7. An employer shall ensure that the physical performance test is administered by a person who has completed Department-authorized training, using the largest type of school bus that an applicant or school bus driver may be required to operate.
8. A person who administers the physical performance test shall either pass or fail the applicant or school bus driver taking the test, complete the physical performance test form, and submit the completed form to the Department and the employer within seven days of the physical performance test.

E. Driving record

1. During the 24 months before the date of application or during any 24-month period while certified as a school bus driver, an applicant or school bus driver shall not accumulate eight or more points against a driving record in this state using the point system contained in A.A.C. R17-4-404.

2. During the 10 years before the date of application, an applicant shall not have repeatedly received citations for violation of traffic law.

F. Training requirements of a school bus driver

1. Before being certified by the Department as a school bus driver, an applicant shall complete a minimum of 14 hours of classroom training in the following:
 - a. State and federal traffic laws,
 - b. Behind-the-wheel driving operations,
 - c. School bus driver's responsibilities to passengers and school,
 - d. Inspections and operations checks,
 - e. Records and reports,
 - f. Special needs transportation, and
 - g. Accidents and emergencies.
2. An employer shall ensure that classroom training is taught by a classroom instructor who is qualified under R13-13-103.
3. At least seven days before classroom training, the classroom instructor shall notify the Department in writing of the date, time, and location of classroom training. The classroom instructor shall notify the Department by any means available at least 24 hours before the date, time, or location of classroom training is changed or canceled.
4. After completion of classroom training, the classroom instructor shall administer to the applicant a written examination standardized by the Department.
 - a. The written examination shall consist of a combination of 50 true or false, multiple choice, and fill-in-the-blank questions. The examination questions shall cover the topics listed in subsection (F)(1).
 - b. Each question has a value of two points. To pass the examination an applicant shall receive a score that equals or exceeds 80% of the total possible score.
 - c. If an applicant is unable to read or speak English, the employer shall arrange to have the examination administered orally to the applicant in the language with which the applicant is most familiar.
 - d. If an applicant does not pass the examination on the first attempt, the applicant may take an examination two more times within 12 months of the first attempt. A different examination shall be administered to an applicant who is taking an examination for the second or third time. The period between examinations shall be a minimum of 24 hours. If the applicant fails the examination on the third attempt, the applicant shall be considered further only if the applicant complies again with the requirements in this Section.
5. The classroom instructor shall submit the following information in a written report to the Department and the employer within seven days from the date of the conclusion of a classroom training course:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of training,
 - d. Location of training,
 - e. Number of hours of training taught by the classroom instructor,
 - f. Each applicant's name, and

- by a nationally recognized organization such as the American Heart Association, American Red Cross, National Safety Council, American Safety and Health Institute, or Arizona Bureau of Mines; by an emergency medical technician licensed in Arizona; or by an agency of the U.S. government.
3. An applicant shall submit to the Department, through the employer, a copy of the front and back of the first-aid card and cardiopulmonary resuscitation card issued to the applicant or other written documentation as proof of completion of the first-aid and cardiopulmonary resuscitation training.
 4. A school bus driver shall renew first-aid and cardiopulmonary resuscitation training before expiration of the current training. Renewal instruction shall be provided by an individual described in subsection (G)(2). The school bus driver shall submit to the Department, through the employer, a copy of the front and back of the first-aid card and cardiopulmonary resuscitation card or other written documentation as proof of renewal of training.
- H.** The Department shall process an application for certification as a school bus driver under R13-13-109.
- I.** Refresher training
1. A school bus driver shall have refresher training no later than 24 months following completion of the training required by subsection (F). Refresher training shall consist of a minimum of 6 1/2 hours of classroom training in the topics listed in subsection (F)(1).
 2. After completing the first refresher training, the school bus driver shall complete a minimum of 6 1/2 hours of classroom training in the topics listed in subsection (F)(1) every 24 months following the last refresher training.
 3. An employer shall ensure that refresher training is taught by a classroom instructor who is qualified under R13-13-103.
 4. A classroom instructor shall teach refresher training and shall submit the following information in a written report to the Department and the employer within seven days from completion of the refresher training:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of training,
 - d. Location of training,
 - e. Number of hours of training taught by the classroom instructor,
 - f. Each school bus driver's name, and
 - g. Each school bus driver's certification number.
 5. In addition to the report required under subsection (I)(4), the classroom instructor shall maintain and submit to the employer within seven days from the conclusion of a refresher training course, a refresher-training course log that includes:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of the refresher training course,
 - d. Name and certification number of each school bus driver attending the refresher training course,
 - e. Subject matter taught in each hour, and

f. Which hours of refresher training were attended by each school bus driver.

J. Records

1. The employer shall maintain qualification and training records of an applicant who is certified and of a school bus driver who terminates employment, and qualification records of an applicant who is denied certification, for 24 months from the date of certification, termination of employment, or denial of certification.
2. The employer shall maintain records of testing required under subsection (C) in accordance with 49 CFR 382.401, October 2006 (no later amendments or editions), published at the U. S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference, and on file with the Department. In this subsection, "controlled substances," as used in 49 CFR 382.401, means marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene.
3. The employer shall transfer the records of a school bus driver to a subsequent employer upon written request by the subsequent employer or school bus driver.
4. Qualification records include:
 - a. Application,
 - b. Driving record,
 - c. Copy of physical examination form, and
 - d. Physical performance test form.
5. Training records include:
 - a. A copy of the classroom-training course log required under subsection (F)(6) that shows the applicant's attendance,
 - b. A copy of the refresher-training course log required under subsection (I)(5) that shows the school bus driver's attendance,
 - c. The classroom training examination score,
 - d. The applicant's behind-the-wheel training log,
 - e. The Proof of Completion of Behind-the-wheel Training and Driving Test form,
 - f. A copy of the first-aid card and cardiopulmonary resuscitation card or other written documentation of completion of first-aid and cardiopulmonary resuscitation training, and
 - g. A copy of the school bus driver certification card issued by the Department.

K. Denial, cancellation, or suspension of certificate

1. Based on an assessment of the totality of the circumstances, the Department may deny a certificate to an applicant or may cancel or suspend a certificate of a school bus driver for:
 - a. Failing to meet or comply with the requirements of this Article;
 - b. Being convicted of or subject to an outstanding warrant for any felony;
 - c. Being convicted of or subject to an outstanding warrant for any misdemeanor reasonably related to the occupation of a school bus driver including, but not limited to:
 - i. Citation for any moving motor vehicle violation, including but not limited

- to, violations of A.R.S. § 28-1591 et seq.;
 - ii. Driving under the influence (A.R.S. § 28-1381 et seq.);
 - iii. Any sexual offense (A.R.S. § 13-1401 et seq.);
 - iv. Any abuse of a child (A.R.S. § 13-3623); or
 - v. Use, sale, or possession of a controlled substance (A.R.S. § 13-3401 et seq.).
 - d. Demonstrating behavior that endangers the educational welfare or personal safety of students, teachers, or school bus drivers or other co-workers;
 - e. Providing false, incomplete, or misleading information to the Department;
 - f. Driving or being in actual physical control of a school bus under a circumstance listed in A.R.S. § 28-1381(A);
 - g. Under A.R.S. §§ 28-3301 through 28-3322, having a commercial driver license canceled, suspended, revoked, or denied; or
 - h. Having a verified positive result to any controlled substance or alcohol test required by subsections (C)(1), (2), or (3), at any time.
 - 2. Any conviction, violation, warrant, or other misconduct described in this Section shall be considered, whether or not the school bus driver was operating a school bus at the time of the conviction, violation, warrant, or other misconduct.
 - 3. An applicant who is denied a certificate or a school bus driver whose certificate is canceled or suspended may request a hearing within 30 days from the date of receipt of the notice of the denial, cancellation, or suspension. The hearing shall be conducted according to the procedures contained in A.R.S. Title 41, Chapter 6, Article 10.
 - 4. The Department shall inform an applicant who is denied a certificate or a school bus driver whose certificate is canceled or suspended of the amount of time that must elapse before the applicant or the school bus driver may reapply for certification. The Department shall include this information in the notice of denial, cancellation, or suspension and the notice of final order, if any, served on the applicant or school bus driver. In determining the amount of time that must elapse before reapplication, the Department shall consider:
 - a. The seriousness of the offense leading to denial, cancellation, or suspension;
 - b. The frequency with which the offense occurred; and
 - c. The amount of time required to correct the offense.
- L. If a school bus driver is terminated from or leaves employment, the employer shall provide written notice to the Department within 30 days of the termination or leaving. If a school bus driver transfers employment from one employer to a second employer, within 14 days of the transfer the second employer shall provide written notice to the Department of the:
 - 1. School bus driver's name,
 - 2. School bus driver's certification number,
 - 3. Name of the transferring employer, and
 - 4. Effective date of the transfer.

R13-13-103. Qualification of Classroom and Behind-the-wheel Instructors

A. To be qualified as a classroom instructor, an individual shall:

1. Submit to the Department through the employer, the following two letters:
 - a. A letter from, signed, and dated by the individual that states the individual's:
 - i. Name, home address, and home phone number;
 - ii. Social Security number;
 - iii. Date of birth;
 - iv. Current employer's name, address, and phone number;
 - v. Dates of all previous letters submitted under this subsection; and
 - b. A letter from the current employer recommending that the individual be considered as a classroom instructor; and
2. Pass a written examination standardized by the Department:
 - a. The written examination shall consist of a combination of 50 true or false, multiple choice, and fill-in-the-blank questions. The examination questions shall cover the topics listed in R13-13-102(F)(1).
 - b. Each question has a value of two points. To pass the examination, an individual shall receive a score that equals or exceeds 90% of the total possible score.
 - c. If an individual taking the written examination is unable to read or speak English, the employer shall arrange to have the examination administered orally in the language with which the individual is most familiar.
 - d. If an individual does not pass the examination, the individual may take a second examination that is different from the first examination.
 - e. If an individual fails to pass the second examination, the individual may receive further consideration by submitting again the letters required by subsection (A)(1) and taking the written examination required by this subsection.
 - f. The employer shall submit each individual's examination score to the Department within seven days from the date of the examination.

B. To remain qualified as a classroom instructor, a classroom instructor shall teach a minimum of 12 hours of classroom or refresher training every 24 months from the date the classroom instructor is first recognized by the Department as qualified.

C. To be qualified as a behind-the-wheel instructor, an individual shall:

1. Be certified continuously as a school bus driver in Arizona for the 12 months immediately before submitting the letters described in subsection (C)(2) and be employed as a certified school bus driver at the time of qualification as a behind-the-wheel instructor;
2. Submit to the Department through the employer, the following two letters:
 - a. A letter from, signed, and dated by the individual that states the individual's:
 - i. Name, home address, and home phone number;
 - ii. Social Security number;
 - iii. Commercial driver license number;
 - iv. Current employer's name, address, and phone number;

- v. Dates of all previous letters submitted under this subsection; and
- b. A letter from the current employer recommending that the individual be considered as a behind-the-wheel instructor; and
- 3. Pass a written examination standardized by the Department.
 - a. The written examination shall consist of a combination of 50 true or false, multiple choice, and fill-in-the-blank questions. The examination questions shall cover the topics listed in R13-13-102(F)(1).
 - b. Each question has a value of two points. To pass the examination, an individual shall receive a score that equals or exceeds 80% of the total possible score.
 - c. If an individual is unable to read or speak English, the employer shall arrange to have the examination administered orally in the language with which the individual is most familiar.
 - d. If an individual does not pass the examination, the individual may take a second examination that is different from the first examination.
 - e. If an individual fails to pass the second examination, the individual may receive further consideration by submitting again the letters required by subsection (C)(2) and taking the written examination required by this subsection.
 - f. The employer shall submit each individual's examination score to the Department within seven days from the date of the examination.
- D. To remain qualified as a behind-the-wheel instructor, a behind-the-wheel instructor shall maintain certification as a school bus driver in this state and teach a minimum of 12 hours of behind-the-wheel training every 24 months from the date the behind-the-wheel instructor is first recognized by the Department as qualified.
- E. Records
 - 1. The employer shall maintain the following records for each classroom and behind-the-wheel instructor for 24 months from the date the instructor is first recognized by the Department as qualified.
 - a. Letter submitted under subsection (A)(1)(a) or (C)(2)(a),
 - b. Letter of recommendation submitted under subsection (A)(1)(b) or (C)(2)(b),
and
 - c. Examination score.
 - 2. The Department shall maintain the documents required under R13-13-102(F)(5) and (I)(4) for 24 months.
- F. The Department shall not recognize an individual as qualified to be a classroom or behind-the-wheel instructor if the individual:
 - 1. Fails to meet or comply with the requirements of this Article;
 - 2. Is convicted of or subject to an outstanding warrant for a felony;
 - 3. Is convicted of or subject to an outstanding warrant for a misdemeanor reasonably related to the occupation of a school bus driver, including:
 - a. Civil traffic violation (A.R.S. § 28-1591 et seq.);
 - b. Driving under the influence (A.R.S. § 28-1381 et seq.);
 - c. Any sexual offense (A.R.S. § 13-1401 et seq.);
 - d. Any abuse of a child (A.R.S. § 13-3623); or

- e. Use, sale, or possession of a controlled substance (A.R.S. § 13-3401 et seq.);
 - 4. Provides false, incomplete, or misleading information to the Department;
 - 5. Drives or is in actual physical control of a school bus under a circumstance listed in A.R.S. § 28-1381(A); or
 - 6. Under A.R.S. §§ 28-3301 through 28-3322, has a commercial driver's license canceled, suspended, revoked, or denied.
- G.** If a classroom or behind-the-wheel instructor is terminated from or leaves employment, the employer shall provide written notice to the Department within 30 days of the termination or leaving. If a classroom or behind-the-wheel instructor transfers employment from one employer to a second employer, within seven days of the transfer the second employer shall provide written notice to the Department of the:
- 1. Name of the classroom or behind-the-wheel instructor,
 - 2. Identification number of the classroom or behind-the-wheel instructor,
 - 3. Name of the transferring employer, and
 - 4. Effective date of the transfer.

R13-13-104. Minimum Standards for School Bus Operation

A. A school bus driver shall perform operations checks of a school bus as required by R13-13-108.

B. Loading or unloading of passengers:

1. As of February 16, 1996, an eight-lamp system as described in R13-13-107(17) shall be installed on a school bus before it is introduced into Arizona. When preparing to stop a school bus on a street or highway, the school bus driver shall activate the alternately flashing amber lamps of an eight-lamp system or the alternately flashing red lamps of a four-lamp system for a minimum distance of 100 feet, in accordance with A.R.S. § 28-930(B). Whenever the school bus is stopped on a street or highway to load or unload passengers, the school bus driver shall deactivate the alternately flashing amber lamps and activate the alternately flashing red lamps of an eight-lamp system, and extend the stop arm and open the service door.
2. When a school bus driver stops the school bus to load or unload passengers, the school bus driver shall set the parking brake and place the transmission in neutral.
3. The distance between stops for the purpose of loading or unloading passengers shall be no less than 600 feet, unless the school determines that more frequent stops are necessary for safety. The school bus driver shall stop the school bus as near the right edge of the traveled portion of the street or highway as possible.
4. A school bus driver shall not load or unload passengers on the traffic side of the bus.
5. When a school bus driver loads or unloads passengers who must cross a street or highway at a location other than an intersection, the passengers shall cross at least 10 feet in front of the front bumper of the school bus. The school bus driver shall not permit passengers who must cross a street or highway to be unloaded from the school bus until all traffic to the front and rear of the school bus is stopped. The school bus driver shall not move the school bus until all passengers have crossed the street or highway.
6. In intersections that use lighted traffic control signals, a school bus driver shall load or unload passengers no closer than 100 feet of the traffic control signal so the passengers may cross with the traffic control signal, either before or after the school bus proceeds.
7. In intersections without lighted traffic control signals, a school bus driver shall load or unload passengers no closer than 50 feet of the intersection so the passengers may cross at the intersection, either before or after the school bus proceeds.
8. A school bus driver shall not stop a school bus on an interstate highway for the purpose of loading or unloading passengers, except that:
 - a. A school bus stop may be established on a frontage road that parallels an interstate highway if no passenger is allowed to cross a divided highway.
 - b. A school bus may stop in a safety rest area as defined by A.R.S. § 28-7901(8) that is part of or adjacent to an interstate highway.
9. A school bus driver shall load or unload passengers on school grounds only in an

- area designated by the school and marked with a sign as a school bus loading area.
10. During loading or unloading of passengers at a designated school bus loading area at a school, the school shall restrict the loading area to school buses, passengers, and school employees assisting in the loading or unloading of passengers.
 11. A school shall allow passengers in a designated school bus loading area only when the passengers are being loaded on or unloaded from a school bus.
 12. A school shall designate all school bus loading areas at locations that prevent backing of the school bus.
 13. In areas at a school not designated as a school bus loading area, a school bus driver shall not back upon or adjacent to the school grounds unless an individual authorized by the school bus driver directs the backing procedure while standing at the rear of the school bus in a position visible to the school bus driver. This provision does not apply to a school bus garage or school bus storage area where passengers are not allowed.
 14. Immediately before a school bus driver engages in backing a school bus, the school bus driver shall sound the horn to warn motorists and pedestrians of the backing procedure. This provision does not apply if the school bus is equipped with an alarm that operates automatically when the school bus is backing.
 15. In addition to the requirements for railroad grade crossings contained in A.R.S. § 28-853, a school bus driver shall comply with the following:
 - a. Use hazard warning lights as described in A.R.S. § 28-947(D) within a minimum of 100 feet of a railroad grade crossing to warn motorists of an intended stop.
 - b. Shut off any radio, compact-disc player, and other source of sound within 50 feet of a railroad grade crossing.
 - c. Stop the school bus, with or without passengers aboard, at a railroad grade crossing when traffic at the railroad grade crossing is not directed by a police officer.
 - d. While stopped at a railroad grade crossing at which traffic is not directed by a police officer, activate the noise suppression switch, completely open the service door and the window to the left of the driver and, by hearing and sight, determine that it is safe to cross. Before proceeding, close the service door. De-activate the noise suppression switch after crossing the tracks.
 - e. Do not stop to load or unload passengers within 200 feet of a railroad grade crossing. This provision does not prohibit stops at a railroad station or on a highway that parallels the railroad tracks.
 16. When a school bus driver loads a wheelchair passenger on a school bus, the school bus driver shall secure both the wheelchair and the wheelchair passenger using the systems described in R13-13-105(E).
- C. An employer shall not allow or require a school bus driver to drive a school bus nor shall a school bus driver drive a school bus:
1. For more than 10 hours after having been off-duty for a minimum of eight consecutive hours;
 2. For any period after having been on-duty for 15 hours after having been off-duty

- for a minimum of eight consecutive hours;
3. After having been on-duty 60 hours in any seven consecutive days if the employer does not operate school buses for seven consecutive days; or
 4. After having been on-duty 70 hours in any eight consecutive days if the employer operates school buses every day of the week.

D. Other requirements:

1. A school bus driver shall wear a seat belt whenever the school bus is in motion.
2. While operating a school bus, a school bus driver shall wear closed-toe, closed-heel shoes that will not interfere with driving the school bus safely or performing other duties of the school bus driver.
3. A school bus driver shall comply with all state traffic laws while operating a school bus except that the school bus driver shall not exceed 65 miles per hour or the posted speed limit, whichever is less, when operating the school bus on an interstate highway.
4. Any person boarding or attempting to board a school bus, whether or not a passenger, shall comply with all instructions given by a school bus driver. If a passenger or a non-passenger boards or attempts to board a school bus and refuses to comply with the school bus driver's instructions, the school bus driver may seek emergency assistance to remove the passenger or non-passenger from the school bus, or prevent the passenger or non-passenger from boarding.
5. All passengers shall sit with their backs against the seat backs, their legs facing towards the front of the school bus, and all parts of their bodies clear of all aisles whenever the school bus is in motion.
6. A school bus driver shall not transport in a school bus more passengers than the rated capacity stated by the school bus manufacturer.
7. A school bus driver shall close the service doors of a school bus before operating the school bus. The service doors shall remain closed whenever the school bus is in motion.
8. A school bus driver shall not place the transmission in neutral or coast with the clutch disengaged on a downhill grade.
9. The driver of a school bus equipped with a two-speed axle shall not shift the axle while descending any hill posted with grade warning signs.
10. A school bus driver shall ensure that a school bus is not fueled in a closed building, while the school bus engine is running or while passengers are on board.
11. A school bus driver or passenger shall not use tobacco in any form on a school bus.
12. A school bus driver shall not carry on a school bus or consume any beverage containing any alcohol while on-duty with the employer or within eight hours before going on-duty with the employer.
13. A school bus driver shall not eat or drink on a school bus unless the school bus is completely stopped.
14. A school bus driver shall not at any time carry on a school bus or use a controlled substance.
15. A passenger shall not carry on a school bus or consume while being transported in a school bus, any beverage containing any alcohol.

16. A passenger shall not carry on a school bus or consume while being transported in a school bus, any dangerous or narcotic drug, as defined in A.R.S. § 13-3401, unless:
 - a. A medical practitioner authorized by the state to write a prescription for the dangerous or narcotic drug has prescribed the dangerous or narcotic drug for the passenger who is carrying or consuming it;
 - b. The school district governing board establishes written policies and procedures regarding the administration of a dangerous or narcotic drug by a trained district employee to a passenger who is being transported in a school bus; and
 - c. The parent or legal guardian of a passenger to whom a dangerous or narcotic drug is administered while being transported in a school bus provides prior written authorization for the dangerous or narcotic drug to be administered to the passenger by a trained district employee.
17. A school bus driver shall not assume responsibility for transporting any medication, whether prescription or over-the-counter, that belongs to a passenger.
18. A school bus driver shall not transport animals, insects, or reptiles in a school bus with the exception of service animals, as defined at A.R.S. § 11-1024(J), which assist disabled passengers.
19. Except for eyeglasses, a passenger or school bus driver shall not carry or transport glass objects on a school bus.
20. A school bus driver or passenger shall not carry on or transport in a school bus an explosive device, gun, knife, or other weapon as defined by school-district policy.
21. A passenger shall not place any part of the passenger's body out of a school bus window or door except when exiting the school bus.
22. When instruments or equipment related to musical or athletic events are transported on a school bus, the school bus driver shall transport them as follows:
 - a. Instruments or equipment shall not occupy seating space if needed for a passenger,
 - b. Instruments or equipment shall not be placed in the school bus driver's compartment or step-well of the school bus,
 - c. Instruments or equipment shall be under the passenger's control at all times or secured in the school bus, and
 - d. Instruments or equipment shall not block an aisle or emergency exit of the school bus at any time.
23. A passenger who carries onto a school bus an object other than an instrument or equipment related to musical or athletic events shall control the object at all times or secure the object in the school bus. If the passenger is not able to control or secure the object in the school bus, the passenger shall not carry the object onto the school bus.
24. A school bus driver shall ensure that all objects inside the school bus are under a passenger's control or secured in a manner that prevents the objects from causing physical injury to others or affecting the safe operation of the school bus.
25. A school bus driver shall not drive a school bus with a trailer or other vehicle attached to the school bus.

26. A school bus driver shall stop the school bus and check the wheels and tires for wear, damage, and inflation after every two continuous hours of driving.
27. All school buses shall have and school bus drivers shall use a two-way voice communication system. The two-way voice communication system shall only be used to assist the school bus driver with passenger transportation.
28. Except as provided in subsection (D)(27), a school bus driver shall not use audio headsets, earphones, earplugs, Bluetooth devices, cellular phones, personal digital assistants, or other interactive wireless devices, whether or not hands-free, when the school bus is in operation.
29. Except when complying with R13-13-108(D), if a school bus driver leaves the driver's compartment, the school bus driver shall set the parking-brake system, place a standard transmission in either first or reverse gear, place an automatic transmission in park or neutral, and turn off the ignition and remove the ignition key from an ignition that uses a key, or set the ignition power-deactivation switch of an ignition that does not use a key.
30. Each time a school bus driver unloads passengers and it appears that no passengers remain on the school bus, the school bus driver shall inspect the interior of the school bus for passengers remaining and objects left on the school bus. If the school bus is equipped with a child alert notification system as described in R13-13-106(6), the school bus driver shall complete all procedures required by the child alert notification system, in addition to the school bus driver's inspection of the interior of the school bus.
31. At least twice during every school year, a school shall conduct an evacuation drill of a school bus at the school that includes every passenger who rides a school bus and is in school on the day of the evacuation drill. At least 14 days before an evacuation drill, a school shall submit to the Department a written notice stating the date, time, and location of the evacuation drill. Each school bus driver shall participate in a minimum of two evacuation drills during every school year. Evacuation drills shall include:
 - a. Practice and instruction in the location, use, and operation of the emergency exits, fire extinguishers, first aid equipment, windows as a means of escape, and communication systems;
 - b. Practice and instruction in when and how to approach, load, unload, and move away from the school bus a minimum of 100 feet;
 - c. Instructions on how weather-related hazards affect emergency procedures; and
 - d. Instructions on the importance of orderly conduct.
32. A white, flashing, strobe lamp as described in R13-13-107(17)(f) may be used only during conditions that produce low visibility or that are hazardous.
33. An owner shall ensure that no lock, except as provided in R13-13-107(10)(h), is installed on any school bus emergency exit or service door.
34. A school bus driver shall ensure that nothing obstructs or interferes with the use of any school bus emergency exit or service door.
35. A school bus driver, passenger, or school administrator shall immediately report to the employer any violation of these rules or state statutes that the school bus

driver, passenger, or school administrator reasonably believes threatens the health, safety, or welfare of a passenger.

E. Reports and recordkeeping:

1. Immediately following any accident involving a school bus, the school bus driver shall report the accident to the employer.
2. Immediately upon receiving notification of any accident involving a school bus, the employer shall notify the Department of the accident by telephone. The employer shall submit written verification of the accident to the Department within 72 hours of the telephone notification.
3. Immediately upon becoming aware of a violation of these rules or state statutes that a reasonable person could conclude caused injury to or threatened the health, safety, or welfare of a passenger, the employer shall notify the Department of the violation by telephone. The employer shall submit a written report of the violation to the Department within 72 hours of the telephone notification.
4. No later than 14 days after an evacuation drill, a school district shall submit to the Department a written report of the evacuation drill identifying the school district, participating school, date, and number of participants.
5. From the date on which a record is created, the employer shall maintain for three years the following written records for each school bus driver:
 - a. On a daily basis, the period of time each school bus driver is on-duty for the employer including the date, each start and quit time, and the total number of hours on-duty for the employer.
 - b. On a daily basis, the total number of hours on-duty for an entity other than the employer during the previous seven days.
6. A school bus driver who performs any compensated work for an entity other than the employer shall provide the employer, in writing, the name and telephone number of the entity and the number of hours the school bus driver works each day for the entity.
7. A school bus driver who receives a citation, whether on-duty or off-duty, shall immediately inform the employer by telephone about the citation and shall submit a copy of the citation to the employer within five days.

R13-13-105. Special Needs Standards

A. General requirements:

1. A school bus introduced to Arizona on or after May 31, 2008 used for transporting disabled passengers shall comply with the minimum standards applicable to school buses and the specifications contained in this Section. A school bus introduced to Arizona before May 31, 2008 used for transporting disabled passengers shall comply with the minimum standards in this Section or shall be maintained in accordance with the manufacturer's original specifications.
2. Any school bus that is used for transporting a passenger who uses a wheelchair shall be equipped with a wheelchair lift.
3. A wheelchair lift shall be located on the side of the bus body opposite the school bus driver. The wheelchair lift shall not be attached to the exterior sides of the school bus and shall be confined within the school bus body when not extended.
4. Any school bus that is used for transporting disabled passengers shall be equipped with a belt cutter that is accessible only to the school bus driver. The belt cutter shall be secured in a location within reach of the school bus driver while belted into the driver's seat. The school bus may be equipped with additional belt cutters. Additional belt cutters shall be accessible only to the school bus driver or adult aides or attendants.

B. Special-service entrance:

1. A school bus used for transporting disabled passengers shall have a special-service entrance of a width and depth to accommodate a wheelchair lift. The special-service entrance shall have a minimum clear opening of 30 inches horizontally to allow for the passage of a wheelchair.
2. The special-service entrance shall be located on the side of the bus opposite the school bus driver and far enough to the rear of the school bus to prevent the special-service entrance door from obstructing the service door when the special-service entrance door is open.
3. A drip molding shall be installed above the special-service entrance to divert water from the special-service entrance.
4. The frame surrounding the special-service entrance shall provide support and strength at least equal to at the conventional service and emergency doors.

C. Special-service entrance doors:

1. A school bus used for transporting passengers in wheelchairs shall provide a special-service entrance door not to exceed 50 inches in width.
2. Two doors may be used for a special-service entrance on a school bus, if the doors are equipped with a positive latching mechanism to prevent accidental opening.
3. The special-service entrance door shall be constructed to open toward the exterior of the school bus. A Type A school bus is exempt from this provision if its special-service entrance door is provided by the school bus chassis manufacturer.
4. The special-service entrance door shall have a fastening device attached to the school bus body to hold the special-service entrance door in an open position.
5. The special-service entrance door shall be weather-sealed by a waterproof

- cushion affixed to the door or door frame.
6. Door materials, panels, and structural strength of a special-service entrance door shall be equivalent to the standards contained in R13-13-107 for a service door and an emergency door. Color, rub rail extensions, if installed, lettering, and all exterior features shall match adjacent sections of the school bus body.
 7. The window in the special-service entrance door shall be made of safety glass, mounted in a waterproof manner that is equal to the mounting of the other windows, and aligned with the side windows of the school bus.
 8. A pressure switch shall be installed in the special-service entrance door frame that will actuate a visible signal located in the school bus driver's compartment when the ignition is in the "on" position to warn the school bus driver when the special-service entrance door is not closed.
 9. A switch shall be installed in the special-service entrance door frame so the wheelchair lift will not operate when the special-service entrance door is closed.

D. Wheelchair lift:

1. A wheelchair lift shall be capable of lifting a minimum load of 800 pounds.
2. When the wheelchair-lift platform is raised to the maximum position, it shall be held in position by the wheelchair lift.
3. Controls shall be provided that enable an individual authorized by the school bus driver to activate the wheelchair lift from either inside or outside the school bus.
4. The wheelchair lift shall be equipped so it may be manually raised or lowered in the event of a power failure to the wheelchair lift.
5. The wheelchair lift shall contain a safety device to prevent the wheelchair-lift platform from falling.
6. The wheelchair lift shall be constructed so it allows the wheelchair-lift platform to rest completely on the ground.
7. All edges of the wheelchair-lift platform shall be designed to restrain the wheelchair and prevent the feet of an individual in the wheelchair from becoming caught during the raising or lowering process.
8. A barrier shall be attached along the outer non-loading edges of the wheelchair-lift platform that will prevent the wheelchair from rolling off the wheelchair-lift platform when the wheelchair-lift platform is placed in any position other than completely extended on ground level.
9. A self-adjusting, skid-resistant plate shall be installed on the loading edge of the wheelchair-lift platform to reduce the incline from the wheelchair-lift platform to ground level. This plate shall be used as a restraining barrier on the loading edge of the wheelchair-lift platform. The wheelchair-lift platform shall be skid-resistant.
10. A school bus may be provided with a battery to be used exclusively to operate the wheelchair lift. If a battery is installed for this purpose, an appropriate size circuit breaker meeting the wheelchair lift manufacturer's specifications shall be installed between the battery and the wheelchair lift motor. The circuit breaker shall be located as close to the power source as possible, but not within the school bus driver's compartment.
11. The wheelchair lift shall be equipped with an adjustable switch that limits the

- electrical power to the wheelchair-lift motor and a bypass valve to prevent pressure from building in the hydraulic system when the wheelchair-lift platform reaches the maximum up or down position.
12. A ramp may be carried on a school bus for use during an occurrence that requires evacuating the school bus. The ramp shall not be stored within the passenger compartment of the school bus.
- E. Wheelchair and wheelchair-passenger securement:**
1. Each wheelchair in a school bus shall be secured in a forward-facing position. Medical equipment and supplies required to accommodate a disabled passenger shall be secured in a school bus by means of alterations approved by the Department in accordance with R13-13-108(G).
 2. Each wheelchair-securement system location in a school bus shall have a minimum clear floor area of 30 inches in width from the interior school bus wall to the aisle and a minimum of 48 inches in length. A wheelchair shall not be placed in a position that prevents passage through the special-service entrance.
 3. Each wheelchair-securement system shall have four full-length tracks, with an L-track four-point tie-down configuration.
 4. The wheelchair-securement system shall provide a minimum of four wheelchair-securement anchorages attached to the school bus floor with a minimum of two anchorages located at the rear of the space designated for a wheelchair and a minimum of two anchorages located at the front of the space.
 5. The wheelchair-securement system shall provide a minimum of one wheelchair-securement device located in each of the rear anchorages and a minimum of one wheelchair-securement device located in each of the front anchorages.
 6. A wheelchair space shall have a minimum of one wheelchair-passenger shoulder restraint anchorage attached to the interior wall of the school bus and a minimum of two wheelchair-passenger restraint anchorages located at the rear of the space.
 7. Each wheelchair space shall have one wheelchair-passenger restraint. A school bus equipped with a wheelchair-passenger restraint shall have the following information available on the school bus:
 - a. A telephone number where information may be obtained about installation, repair, and parts; and
 - b. Instructions regarding use of the restraint, including a diagram showing the proper placement of the wheelchair and positioning of securement devices and occupant restraints, including correct belt angles.
- F. Dome light:** A dome light shall be placed in the interior ceiling of the school bus to illuminate the wheelchair lift area. The dome light shall be activated by a pressure switch located in the special-service entrance door or by a manually operated switch located in the interior of the school bus no more than one foot from the special-service entrance door. This switch shall be used exclusively for the dome light.
- G. Aisles:** All aisles leading to an emergency door from any wheelchair space shall be a minimum of 30 inches in width. The emergency door opening shall be a minimum of 30 inches in width.
- H. Seating arrangements:** All fixed seats in a special-needs school bus shall be forward facing.

- I. Emblems: A school bus used for transporting disabled passengers shall display two International Symbol of Accessibility emblems. One emblem shall be placed below the upper window on the emergency door or below the window on the special-service entrance door, and the second emblem shall be placed below the windshield on the side of the bus or on the bumper opposite the school bus driver. The emblems shall be made of blue, reflective material and be a minimum of 6 inches and a maximum of 12 inches in width and height and shall contain a reflective white wheelchair impression with a minimum of 1/8 inch reflective white border around the outer edges of the emblems.
- J. Types A and B school buses used to transport disabled passengers shall comply with the specifications contained in this Section except:
1. A ramp may be installed in place of a wheelchair lift;
 2. If a ramp is used, it shall be of a strength and rigidity to support a wheelchair, passenger, and an individual attending the wheelchair passenger. The ramp shall be equipped with a barrier on each longitudinal side to prevent the wheelchair from leaving the ramp;
 3. The floor of the ramp shall be covered with nonskid material; and
 4. A ramp shall not be carried in the passenger compartment of a school bus.

R13-13-106. Minimum Standards for School Bus Chassis

The chassis of a school bus introduced to Arizona on or after May 31, 2008 shall meet the requirements of this Section. The chassis of a school bus introduced to Arizona before May 31, 2008 shall meet the requirements of this Section or shall be maintained in accordance with the manufacturer’s original specifications.

1. Air cleaner: An engine intake air cleaner shall be installed in the school bus that meets engine specifications defined by the school bus manufacturer.
2. Axles: The front and rear axles and suspension assemblies shall have a gross axle weight rating consistent with that stated by the chassis manufacturer on a notice located in the school bus driver's compartment.
3. Back-up alarm: If installed, an alarm that emits a warning sound when the school bus is backing shall conform to the following:
 - a. The alarm-signaling device shall be of electronic, solid state design and shall emit an audible sound of a minimum of 97 dB(A) measured at 4 feet, 0° access from the source of the sound.
 - b. The alarm-signaling device shall be wired into the backup light circuits and shall emit sound automatically when the gear shift lever is in “reverse” position.
 - c. The alarm-signaling device shall be attached to the school bus chassis or body behind the rear axle.
4. Brakes:
 - a. A school bus with a manufacturer-designed passenger capacity of 60 or less shall be equipped with a service-brake system that uses compressed air or hydraulic assist.
 - b. A school bus with a manufacturer-designed passenger capacity greater than 60 shall be equipped with a service- brake system that uses compressed air.
 - c. In addition to the service-brake system, a school bus shall be equipped with a parking-brake system to keep the school bus from moving when parked.
 - d. The service brakes in a compressed-air system shall be adjusted using the following criteria:

<u>Type</u>	<u>Outside Diameter of Air Chamber</u>	<u>Brake Adjustment Limit</u>
<u>6</u>	<u>4 1/2 inches</u>	<u>1 1/4 inches</u>
<u>9</u>	<u>5 1/4 inches</u>	<u>1 3/8 inches</u>
<u>12</u>	<u>5 11/16 inches</u>	<u>1 3/8 inches</u>
<u>16</u>	<u>6 3/8 inches</u>	<u>1 3/4 inches</u>
<u>20</u>	<u>6 25/32 inches</u>	<u>1 3/4 inches</u>
<u>24</u>	<u>7 7/32 inches</u>	<u>1 3/4 inches</u>
<u>30</u>	<u>8 3/32 inches</u>	<u>2 inches</u>
<u>36</u>	<u>9 inches</u>	<u>2 1/4 inches</u>

- e. The service brakes in a “long stroke” clamp type brake system shall be

adjusted using the following criteria:

Type	Outside Diameter of Air Chamber	Brake Adjustment Limit
<u>12</u>	<u>5 11/16 inches</u>	<u>1 3/4 inches</u>
<u>16</u>	<u>6 3/8 inches</u>	<u>2 inches</u>
<u>20</u>	<u>6 25/32 inches</u>	<u>2 inches</u>
<u>24</u>	<u>7 7/32 inches</u>	<u>2 inches</u>
<u>24*</u>	<u>7 7/32 inches</u>	<u>2 1/2 inches</u>
<u>30</u>	<u>8 3/32 inches</u>	<u>2 1/2 inches</u>

*For 3" maximum stroke type 24 chambers

- f. The service-brake system in a compressed-air system shall contain an emergency-brake system that will activate when the air loss in the service-brake system reaches 20 to 40 pounds per square inch.
 - g. A school bus using a compressed-air or hydraulic-assist service-brake system shall be equipped with a signal located in the school bus driver's compartment that emits a continuous audible or visible warning to the school bus driver when:
 - i. The air pressure available in a compressed-air braking system is 60 pounds per square inch or less, or
 - ii. There is a loss of fluid flow from the main hydraulic pump or loss of electric source powering the back-up system in a hydraulic-assist system.
 - h. A school bus using a compressed-air service-brake system shall be equipped with one or two illuminated gauges located in the school bus driver's compartment that show the pounds per square inch of compressed air available for the operation of the brake.
 - i. A compressed-air brake system with a dry reservoir shall have a one-way valve that will prevent the loss of compressed air between the dry reservoir and the source of compressed air.
 - j. A brake system with a wet reservoir shall have a valve located at the bottom of the wet reservoir that operates automatically or can be operated remotely or manually to eject the moisture from the reservoir.
 - k. Compressed-air or hydraulic-assist brake lines and booster-assist lines shall be installed in a manner that prevents heat, vibration, and chafing damage.
 - l. The brake systems of Types C and D school buses shall be installed so the chassis components can be visually inspected to detect brake lining wear without removal of any of the chassis components.
5. Front bumper: The front bumper shall be positioned at the forward-most part of the school bus and extend to the outer edges of the school bus.
6. Child alert notification system: A school bus may be equipped with an electronic or mechanical child alert notification system. If a school bus is equipped with a child alert notification system, the device shall be installed in a manner that does not interfere with any other existing operating or electrical component. A child

- alert notification system in a school bus shall not have an override or bypass capability.
7. Clutch: The clutch torque capacity shall be equal to or greater than the engine torque output.
 8. Color: The chassis, including wheels and front bumper, shall be painted black. The hood and fenders shall be painted National School Bus Yellow as described in R13-13-107(6).
 9. Cooling system: A school bus shall be equipped with a cooling system that maintains the engine temperature operating range required to prevent damage to the school bus engine.
 10. Drive shaft: Each section of the drive shaft to the rear driving axle shall be protected by a metal guard around its circumference to reduce the possibility of the drive shaft penetrating through the school bus floor or dropping to the ground.
 11. Electrical system:
 - a. Battery:
 - i. The battery shall have a minimum cold-cranking capacity rating equal to the cranking current required by the engine for 30 seconds at 0° F. and a minimum reserve capacity rating of 120 minutes at 25 amperes.
 - ii. The battery shall have a higher capacity than specified in subsection (11) (a)(i) if optional equipment installed on the school bus requires the higher capacity.
 - iii. Because all batteries are to be secured in a sliding tray in the bus body as required by R13-13-107, chassis manufacturers shall mount batteries temporarily on the chassis frame, except that a van conversion or cutaway front-section chassis may be secured in accordance with the manufacturer's standard configuration. However, in all cases the battery cable provided with the chassis shall have sufficient length to allow some slack, and shall be of sufficient gauge to carry the required amperage.
 - b. Alternator:
 - i. All alternators shall conform to the recommended practices of Standard J180, January 2002 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, which is incorporated by reference and on file with the Department.
 - ii. All Type A-2 and Type B buses with a GVWR of 15,000 pounds or less shall have an alternator with a minimum of 130 amps.
 - iii. All Type A-2 and Type B buses with a GVWR over 15,000 pounds, and all Type C and D buses shall be equipped with a heavy-duty truck or bus-type alternator meeting Standard J180, which is incorporated by reference in subsection (b)(i), having a minimum output rating of 130 amps, and shall produce a minimum current output of 50% of the rating at engine idle speed. The alternator may be either pad-mounted or hinge-mounted.
 - iv. Buses equipped with an electrically powered wheelchair lift or air conditioning may be equipped with a device that monitors the electrical system voltage and advances the engine idle speed when the voltage drops

to, or below, a pre-set level.

v. A belt-driven alternator shall be capable of handling the rated capacity of the alternator with no detrimental effect on any other driven components.

vi. A direct-drive alternator may be installed instead of a belt-driven alternator.

vii. If the school bus is equipped with an air conditioning system, the alternator shall have a minimum charging rate of 160 amperes per hour.

viii. The alternator on a school bus shall contain a regulator to control the voltage to the battery.

c. Wiring:

i. All wiring shall conform to the recommended practices of Standard J1292, October 1981 (no later amendments or editions), published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.

ii. All wiring shall use a standard color or number coding and each chassis shall contain a wiring diagram that details the wiring of the chassis.

iii. The chassis shall be equipped with a connection to provide electrical power to the school bus. The connection shall be located on the chassis cowl or on the engine compartment of a school bus designed without a chassis cowl. The connection shall contain terminals for the main 100 ampere body circuit, tail lamps, right-turn signal, left-turn signal, stop lamps, backup lamps, and instrument panel lights. The instrument panel lights shall have a rheostat control.

12. Engine horsepower: The gross vehicle weight rating of a school bus shall not exceed 185 pounds for each engine horsepower as published by the manufacturer on a notice located on the school bus engine.

13. Exhaust system:

a. The exhaust pipe, muffler, and tailpipe shall be located under the school bus body and attached to the chassis.

b. The tailpipe shall be constructed of a corrosion-resistant tubing material at least equal in strength and durability to 16-gauge steel tubing.

c. The exhaust system on a gasoline-powered chassis shall be insulated from the fuel tank and fuel tank connections by a shield at any point where the exhaust system is 12 inches or less from the fuel tank or fuel tank connections.

14. Frame:

a. A school bus frame shall be of a design and strength capable of supporting the gross vehicle weight of the school bus.

b. A school bus frame shall not be altered for any purpose.

c. Holes in top or bottom flanges of frame rails are not permitted except as provided by the manufacturer. There shall be no welding to the frame rails except by the chassis or body manufacturer or the manufacturer's certified agent.

d. The school bus frame shall not be cracked, loose, sagging, or broken.

e. Brackets securing the cab or the body of the school bus to the frame shall not

- be loose, broken, or missing.
- f. The frame rail flanges shall not be bent, cut, or notched, except as specified by the manufacturer.
 - g. All accessories mounted to the school bus shall be secured as specified by the manufacturer.
 - h. Holes shall not be drilled in the top or bottom rail flanges, except as specified by the manufacturer.
15. Front fenders of a Type C school bus: The outer edges of the front fenders shall be wider than the outer edges of the front tires when the front wheels are in the straight-ahead position.
16. Fuel system:
- a. A school bus shall contain a fuel tank with a minimum 30-gallon capacity, with a minimum dispersion of 25 gallons of fuel to the engine. The fuel tank shall be vented to the outside of the school bus body so fuel spillage will not contact any part of the exhaust system.
 - b. On a Type B, Type C, or Type D school bus, no portion of the fuel system that is located outside of the engine compartment, except the filler tube, shall extend above the top of the chassis frame.
 - c. A fuel filter with replaceable element shall be installed between the fuel tank and engine.
 - d. The fuel line that supplies fuel to the engine shall be located at the top of the fuel tank.
17. Horn: A school bus shall be equipped with at least one horn capable of producing a sound level between 82 and 102 dB(A) when tested according to the Standard J377, March 2001 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.
18. Instruments and instrument panel:
- a. The chassis shall be equipped with the following instruments:
 - i. Speedometer;
 - ii. Odometer that will give accrued mileage to seven digits, including tenths of miles;
 - iii. Voltmeter or ammeter;
 - iv. Oil pressure gauge;
 - v. Water temperature gauge;
 - vi. Fuel gauge;
 - vii. Upper beam head lamp indicator;
 - viii. Brake system signal as required by R13-13-106(4)(f);
 - ix. Turn signal indicator; and
 - x. Air pressure or hydraulic gauge.
 - b. The instruments shall be mounted on the instrument panel in the school bus driver's compartment and visible to the school bus driver while seated in the driver's seat.
 - c. The instrument panel shall be equipped with a rheostat switch that controls the illumination to the instrument panel and the gear shift selector indicator.

19. Oil filter: A replaceable element or cartridge-type oil filter shall be provided with a minimum capacity that meets or exceeds the capacity recommended by the manufacturer of the school bus engine.
20. Openings: All openings in the floorboard and in the fire wall between the chassis and passenger compartment shall be sealed.
21. Splash guards:
- a. A school bus shall be equipped with rear fender splash guards constructed of flexible rubberized material.
 - b. The splash guards shall be wide enough to cover the tire tread width, installed close enough to the tire tread surface to control side-throw of road surface material, and extend to within 8 inches of ground level.
22. Steering system:
- a. Power steering is required on all school buses manufactured after January 1, 1984.
 - b. Bracing extending from the center of the steering wheel to the steering wheel ring shall not be cracked or missing.
 - c. The distance of movement of the steering wheel between two points of resistance shall not be greater than the following when measured with the engine running:

<u>Steering wheel diameter</u>	<u>Power steering</u>	<u>Manual steering</u>
<u>16 in. or less</u>	<u>6 3/4 inches</u>	<u>4 1/2 in.</u>
<u>18 in.</u>	<u>7 1/8 inches</u>	<u>4 3/4 in.</u>
<u>20 in.</u>	<u>7 7/8 inches</u>	<u>5 1/4 in.</u>
<u>22 in.</u>	<u>8 5/8 inches</u>	<u>5 3/4 in.</u>

- d. There shall be clearance of at least 2 inches between the steering wheel and any object in the driver's compartment.
 - e. A non-adjustable steering column shall be fastened in a fixed position. An adjustable steering column shall be equipped with a locking mechanism.
 - f. The steering gear housing shall not have loose or missing mounting bolts. There shall not be cracks in the gear housing or its mounting brackets.
 - g. The connecting arm on the steering gear power source shall not be loose.
 - h. The steering wheel shall turn freely in both directions.
 - i. The steering system shall have a means for lubrication of all wear-points.
23. Suspension:
- a. Shock absorbers:
 - i. A school bus shall be equipped with front and rear double-acting shock absorbers. Replacements to shock absorbers shall be made according to the specifications of the manufacturer's part number as stamped on the shock absorber.
 - ii. If a school bus is manufactured with tandem rear axles, rear shock absorbers are not required.
 - b. Suspension system:

- i. Capacity of suspension assemblies shall be commensurate with the chassis manufacturer's gross vehicle weight rating.
- ii. If leaf-type rear springs are used, they shall be a progressive rate or multi-stage design.

24. Tires and wheels:

- a. Tires and wheels shall have an accumulated load rating at least equal to the gross vehicle weight rating.
- b. Dual rear tires shall be provided on all school buses that have a gross vehicle weight rating of more than 10,000 pounds.
- c. Each tire on a particular axle shall be the same size.
- d. All tires on a school bus shall be bias or all tires on a school bus shall be radial and shall not differ more than one size between front and rear axles.
- e. On a Type C or D school bus, a spare tire, if present, shall be in a carrier mounted outside the passenger compartment.

25. Transmission: The school bus transmission shall have no fewer than three forward speeds and one reverse speed.

26. Turning radius:

- a. A chassis with a wheelbase of 264 inches or less shall have a right and left turning radius of not more than 42 1/2 feet, as measured to the edge of the front tire at the outside of a circle as the school bus moves within the circle.
- b. A chassis with a wheelbase of more than 264 inches shall have a right and left turning radius of not more than 44 1/2 feet, as measured to the edge of the front tire at the outside of a circle as the school bus moves within the circle.

27. Weight:

- a. The gross vehicle weight of a school bus shall not exceed the chassis manufacturer's gross vehicle weight rating for the chassis as recorded on a notice located in the school bus driver's compartment.
- b. To calculate the gross vehicle weight of a school bus, add the chassis weight, the school bus body weight, the school bus driver's weight, and the total seated passenger weight.
 - i. For the purpose of calculation, the school bus driver's weight is 150 pounds.
 - ii. For the purpose of calculation, the passenger weight is 120 pounds per seated passenger.
- c. The weight distribution of a school bus on a level surface that is fully loaded according to the gross vehicle weight rating shall not exceed the front axle gross weight rating or rear axle gross weight rating as recorded on a notice located in the school bus driver's compartment.

R13-13-107. Minimum Standards for School Bus Body

The body of a school bus introduced to Arizona on or after May 31, 2008 shall meet the requirements of this Section. The body of a school bus introduced to Arizona before May 31, 2008 shall meet the requirements of this Section or shall be maintained in accordance with the manufacturer's original specifications.

1. Air conditioning system: The school bus may be installed with an air conditioning system. If installed, the air conditioning system shall:
 - a. Be of a mechanical vapor compression refrigeration type;
 - b. Be manufactured to conform to the requirements of Standard J639, June 2005 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department;
 - c. Have sufficient power for simultaneous cooling, circulating, and dehumidifying the air;
 - d. Be provided with refrigerant that is nontoxic, nonflammable, and non-explosive;
 - e. Have all power and grounding installed according to the manufacturer's specifications; and
 - f. Have exhaust system exit from the rear of the vehicle, and extend to, but not more than 2 inches beyond the outer edge of the rear bumper.
2. Aisle:
 - a. The center aisle of a school bus shall have a clearance of not less than 12 inches at the bottom of the seat cushion, increasing to 15 inches at the top of the seat backs.
 - b. Aisles to side emergency doors shall have a minimum clearance of 12 inches which may be achieved by using flip-up type seats.
3. Auxiliary fan:
 - a. An auxiliary fan, if installed, shall be placed in a location that does not obstruct the school bus driver's view of any mirror located on the school bus.
 - b. An auxiliary fan, if installed, shall have a 6-inch nominal diameter, with the fan blades covered by a protective cage.
 - c. Each installed auxiliary fan shall be controlled by a switch that is independent of any other electrical system.
4. Battery:
 - a. A battery shall be secured to a slide-out or swing-out tray in a vented compartment in the school bus body, so the battery is accessible to the outside for servicing. If the battery compartment has a door that is not removable, the door shall be secured by a fastening device when the door is in a closed position. If the battery compartment has a removable cover, the cover shall be secured by a fastening device when the cover is in place.
 - b. The word "Battery" shall be printed in unshaded black letters that are no more than 2 inches in height on the battery-compartment door or cover or immediately above the battery-compartment door or cover.
 - c. Buses with a battery located under the engine hood are exempt from these

provisions.

5. Belt cutter: A school bus with passenger seat belts shall be equipped with a belt cutter having a full width handgrip and a protected, replaceable or non-corrodible blade. The belt cutter shall be mounted in a location accessible to the seated driver, and in an easily detachable manner. The belt cutter shall be accessible only to the school bus driver.

6. Color:

a. A school bus body shall be painted National School Bus Yellow according to the following specifications and tolerances:

<u>Description</u>	<u>Reflectance</u>	<u>Chromaticity</u>	
		<u>X</u>	<u>Y</u>
<u>Centroid</u>	<u>41.5%</u>	<u>.5139</u>	<u>.4434</u>
<u>V+ Light Limit</u>	<u>42.9%</u>	<u>.5139</u>	<u>.4427</u>
<u>V- Dark Limit</u>	<u>39.8%</u>	<u>.5133</u>	<u>.4422</u>
<u>H+ Green Limit</u>	<u>41.6%</u>	<u>.5123</u>	<u>.4368</u>
<u>H- Red Limit</u>	<u>41.7%</u>	<u>.5168</u>	<u>.4489</u>
<u>C+ Vivid Limit</u>	<u>41.5%</u>	<u>.5188</u>	<u>.4457</u>
<u>C- Weak Limit</u>	<u>41.5%</u>	<u>.5095</u>	<u>.4405</u>

b. The bumpers, lamp hoods, lettering, and rub rails on a school bus body shall be black.

7. Crossing control arm:

a. A school bus may be equipped with a crossing control arm. If installed, all components and all connections of the crossing control arm shall:

i. Meet the requirements set forth in Standard J1133, November 2004 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department;

ii. Be mounted on the right side of the front bumper;

iii. When opened, extend in a line parallel to the body side and aligned with the right side wheel;

iv. Be weatherproofed;

v. Incorporate system connectors (electrical, vacuum, or air) at the gate and be easily removable to allow for towing of the school bus;

vi. Be constructed of non-corrodible or nonferrous material, or treated in accordance with the school bus body sheet metal specification;

vii. Have no sharp edges or projections that could cause injury or be a hazard to students;

viii. Be rounded at the end of the crossing control arm;

ix. Extend approximately 70 inches (measured from the bumper at the arm assembly attachment point) when in the extended position;

x. Not extend past the end of the bumper when in the stowed position;

xi. Extend simultaneously with the stop signal arm, activated by the stop signal arm control; and

xii. Include a device attached to the bumper near the end of the arm to automatically retain the arm while in the stowed position. The device shall not interfere with the normal operations of the crossing control arm.

b. An automatic recycling interrupt switch may be installed for temporarily disabling the crossing control arm.

8. Defrosters:

a. Defrosting and defogging equipment shall direct a flow of heated air onto the windshield, the window to the left of the driver, and the glass in the viewing area directly to the right of the driver to eliminate frost, fog, and snow.

b. The defrosting system shall conform to Standards J381 September 2000 (no later amendments or editions) and J382, September 2000 (no later amendments or editions), both published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001 incorporated by reference and on file with the Department.

c. An auxiliary fan shall not to be used in place of a defrosting and defogging system.

d. A portable heater shall not be used in place of a defrosting or defogging system.

9. Electrical wiring:

a. All electrical wiring on a school bus shall conform to the standards contained in Standard J1292, October 1981 (no later amendments or editions), published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001 and incorporated by reference and on file with the Department.

b. Electrical wiring that is coded by color shall be coded as follows:

- i. Left Rear Directional Light: Yellow
- ii. Right Rear Directional Light: Dark Green
- iii. Stoplights: Red
- iv. Back-up Lights: Blue
- v. Taillights: Brown
- vi. Ground: White
- vii. Ignition Feed, Primary Feed: Black

c. Circuits: Electrical wiring circuits shall be protected by a fuse, circuit breaker, or Field Effect Transistor and shall be coded by number or color on an electrical wiring diagram located in the driver's compartment or the electrical access panel door. There shall be at least seven circuits as follows:

- i. Head, tail, stop, and instrument panel lamps;
- ii. Clearance and step-well lamps;
- iii. Dome lamps;
- iv. Ignition and emergency door signal;
- v. Turn signal lamps;
- vi. Alternately flashing signal lamps; and
- vii. Heaters and defrosters.

d. All electrical wires passing through metal openings shall be protected by a non-metal grommet.

- e. Electrical wires not enclosed within the school bus body shall be fastened at intervals of not more than 18 inches.
10. Emergency exits: A door, push-out window, or roof hatch used as an emergency exit shall conform to the following:
- a. On the inside and outside of a school bus, the words “EMERGENCY EXIT” or “EMERGENCY DOOR” shall be printed in black, unshaded letters at least 2 inches high above an emergency door or push-out window and at least 1 inch high on a roof hatch.
 - b. Each emergency exit shall open toward the exterior of the school bus and shall be labeled within 6 inches of the interior release mechanism with black lettering at least 3/8 of an inch high instructing how the exit is to be opened.
 - c. On a Type A school bus with double rear doors used as emergency exits, the rear doors shall be secured with upper, center, and lower latches to the door frame.
 - d. The upper portion of each door used as an emergency exit shall be equipped with a window made of safety glass with an area not less than 400 square inches. A door located in the rear end of the school bus used as an emergency exit shall also contain a lower window panel of safety glass of not less than 350 square inches. A Type A school bus that contains double rear doors used as emergency exits is exempt from this provision.
 - e. There shall be no steps on the outside of the school bus leading to an emergency exit.
 - f. A header pad filled with a material to protect against injury shall be attached to the top edge of the frame of a door used as an emergency exit. The header pad shall be a minimum of 3 inches wide and 1 inch thick and extend the full width of the door opening.
 - g. Each emergency exit shall be equipped with a latch that opens from the inside of the school bus and is connected to an electrical buzzer audible in the driver’s compartment that actuates when the latch is being released.
 - h. Except for interlock/barrel bolt devices, if a lock is installed on an emergency exit, the lock shall be secured only by using a key and shall deactivate the ignition system of the school bus when locked.
11. Emergency equipment:
- a. All emergency equipment shall be mounted in the driver’s compartment or adjacent to either side of the service entrance and shall be readily accessible. If the emergency equipment is mounted within a closed compartment, the compartment shall be clearly labeled as containing the emergency equipment.
 - b. Fire extinguisher:
 - i. A school bus shall be equipped with a minimum of one 5-pound pressurized, dry, chemical fire extinguisher of a type rated not less than 2A-10-BC by the Underwriter’s Laboratories, Inc., as described by the National Fire Protection Association, Inc., One Batterymarch Park, Quincy, MA 02269, in NFPA 10: Standard for Portable Fire Extinguishers, published in 2006 (no later amendments or editions), incorporated by reference and on file with the Department.

- b. Each school bus owned by a school or a private company shall display either the name of the school and school number, if any, or the name of the private company on each exterior side of the school bus between the rub rails at the center line and seat cushion levels in black unshaded letters that are at least 5 inches in height. Additionally, a school bus owned by a private company that displays the name of the school and school number as described above, may display the company's name on each exterior side of the school bus below the floor line in black unshaded letters that are a maximum of 2 inches in height.
 - c. An identification number assigned to a school bus by an owner shall be placed on the front and rear bumpers of the school bus and on each exterior side of the school bus below the floor line rub rail and forward of the centerline of the school bus. The identification number on each bumper shall be National School Bus Yellow. The identification number on each exterior side shall be black. Each identification number shall be a minimum of 5 inches in height.
 - d. In addition to an identification number, a school bus may be identified by an emblem placed on the loading side of the front bumper or the exterior wall of the loading side below the floor line rub rail and forward of the center line of the school bus, or both. The emblem shall be painted or decaled on or attached to a magnetic backing.
 - e. In addition to an identification number, a school bus may display a route identification sign. If displayed, the route identification sign shall:
 - i. Be installed with a heavy duty Velcro, magnetic, screw-type or similar fixture;
 - ii. Be a minimum of 5 inches in height; and
 - iii. Be located on a flat surface of the bus body, excluding glass.
16. Interior: If the ceiling is constructed with overlapping panels, the first panel placed in the ceiling shall be overlapped by the following panel and each panel shall consecutively overlap to the rear end of the school bus. Exposed edges in the interior of the school bus shall be beaded, hemmed, flanged, or rounded to eliminate sharp edges.
17. Lamps and signals:
- a. All lamps on the exterior of a school bus shall conform to the provisions contained in 49 CFR 393.9 et seq. of the Federal Motor Carrier Safety Regulations, October, 2006 (no later amendments or editions) published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference and on file with the Department.
 - b. Interior lamps shall be provided that illuminate the center aisle and step well.
 - c. Alternately flashing signal lamps:
 - i. When a school bus is equipped with a four-lamp system, the system shall consist of two red alternately flashing signal lamps located one on the left and one on the right above the rear windows of the school bus and two red alternately flashing signal lamps located one on the left and one on the right above the windshield.
 - ii. When a school bus is equipped with an eight-lamp system, the four red

- alternately flashing signal lamps shall be installed as described in subsection (14)(c)(i) and the four amber alternately flashing signal lamps shall be installed as follows: one amber alternately flashing signal lamp shall be located adjacent to each red alternately flashing signal lamp, at the same level, but closer to the vertical centerline of the school bus. The system of red and amber alternately flashing signal lamps shall be wired so the amber alternately flashing signal lamps are activated manually and the red alternately flashing signal lamps are activated automatically or manually.
- iii. Except for LED lamps, each alternately flashing signal lamp shall be covered by a lamp hood.
- d. Turn signal and stop lamps:
- i. Except as provided in subsections (17)(d)(iii) and (17)(d)(iv), all school buses shall be equipped with amber side-mounted turn signals. The turn signal lamp on the left side of the bus may be mounted rearward of the stop signal arm and the turn signal lamp on the right side may be mounted rearward of the entrance door.
- ii. Except on Type A school buses, a school bus body shall be equipped with rear turn signal lamps that are at least 7 inches in diameter, or if the lamp shape is other than round, a minimum of 38 square inches of illuminated area. The lens area of the rear turn signal lamps on Type A school buses shall be at least 21 square inches. The rear turn signal lamps shall be connected to the hazard warning switch located in the driver's compartment to allow the school bus driver to activate simultaneous flashing of turn signal lamps when needed as a traffic hazard warning. The rear turn signal lamps shall be located to the far left and right sides of the flat surface of the rear of the school bus body and below the rear window.
- iii. A Type C school bus may have a double-faced turn signal lamp that is visible from the front and rear of the school bus and mounted on the tops or sides of both front fenders or may have a turn signal lamp mounted on the left and right sides of the grill and may have a turn signal lamp mounted on each side of the school bus body between the window line and the second rub rail and forward of the vertical centerline.
- iv. A Type D school bus may have a turn signal lamp mounted at the front of the school bus body above each head lamp and may have a turn signal lamp mounted on each side of the school bus body between the window line and second rub rails and forward of the vertical centerline of the school bus.
- v. A 7 inch diameter stop lamp, or if the lamp shape is other than round, a stop lamp with a minimum of 38 square inches of illuminated area shall be located toward the centerline and adjacent to each of the rear turn signal lamps.
- e. Backup lamps: A school bus shall be equipped with two backup lamps with clear lenses, located one on the right and one on the left rear panels below the rear windows.

- f. White flashing strobe lamp: If used on a school bus, a strobe lamp shall have a single clear lens that emits light 360 degrees around its vertical axis and shall be located on the longitudinal centerline of the school bus roof 1/3 to 1/2 of the distance forward from the rear of the school bus body unless this placement restricts the view of the strobe lamp.
 - i. If the view of the strobe lamp is restricted when the strobe lamp is located 1/3 to 1/2 of the distance forward from the rear of the school bus body, the strobe lamp may be mounted immediately to the rear of the roof hatch.
 - ii. The strobe lamp shall be controlled by a manual switch located in the driver's compartment.
 - iii. A pilot lamp shall be located in the driver's compartment to show the school bus driver that the strobe lamp is activated.
18. Mirrors:
- a. Interior mirror: The interior mirror shall be made of either laminated glass or glass bonded to a backing that will retain the glass in the event of breakage. The interior mirror in Types B, C, and D school buses shall be a minimum of 6 inches in height and 30 inches in length surrounded by a frame with rounded corners. The interior mirror in Type A buses shall be a minimum of 6 inches in height and 16 inches in length.
 - b. Exterior mirrors: A school bus shall comply with the requirements contained in 49 CFR 571.111, October 2006 (no later amendments or editions), published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference and on file with the Department.
19. Noise suppression switch: A school bus shall be equipped with a manual noise suppression switch. Identification shall be provided on or adjacent to the switch, in order to clearly state its purpose and distinguish it from other controls. This switch shall be an on-off type that deactivates body equipment that produces noise, including, at least, the AM-FM radio, heaters, air conditioners, fans, and defrosters. This switch shall not deactivate safety systems, such as windshield wipers or lighting systems.
20. Overall length: The overall length of a school bus shall not exceed 45 feet including accessories.
21. Overall width: The overall width of a school bus shall not exceed 102 inches excluding mirrors.
22. Rear bumper:
- a. The rear bumper shall be made of a minimum of 3/16 inch thick pressed steel that is a minimum of 8 inches in total height.
 - b. The rear bumper shall be wrapped around the back corners of the bus and shall extend toward the front of the school bus for at least 12 inches as measured from the rear-most point of the school bus body at the floor line.
 - c. The rear bumper shall be attached to the chassis frame and braced to support the rear corners of the bumper.
 - d. The rear bumper shall extend at least 1 inch beyond the rear-most part of the school bus body as measured at the floor line.

- e. The rear bumper shall not be equipped with footholds or handles.
 - f. A Type A school bus equipped with the chassis manufacturer's rear bumper is exempt from subsections (22)(a) through (22)(c).
23. Restraining barrier:
- a. The restraining barrier shall be a minimum of 38 inches high as measured from the interior floor of the school bus to the top of the restraining barrier.
 - b. The restraining barrier shall be the same width as the seat directly behind the restraining barrier.
24. Rub rails:
- a. There shall be no fewer than two rub rails located on a school bus as follows:
 - i. One rub rail shall be located on each side of the school bus approximately at seat cushion level and shall extend from the rear post of the service door frame completely around the school bus body, excluding the emergency door, to the front post of the school bus driver's window.
 - ii. One rub rail shall be located on each side of the school bus approximately at the floor line and shall extend from the rear post of the service door frame to the rear corner post of the school bus body and from the front post of the school bus driver's window to the rear corner post on the driver's side
 - b. Rub rails are not required on emergency doors, special-service entrance door, access panels and compartment doors, and wheel well openings.
 - c. Each rub rail shall be attached on the outside of the school bus body at each structural post in the school bus body.
 - d. Each rub rail shall be a minimum of 4 inches in width and constructed of corrugated or ribbed 16-gauge steel.
25. Seat belt for school bus driver: A seat belt for the school bus driver shall be installed in the driver's compartment. The seat belt shall be equipped with a retractor on each side of the school bus driver's seat to keep the seat belt retracted and off the floor when not in use.
26. Seats:
- a. Each seat shall have a minimum depth of 15 inches measured from the front of the seat cushion to the seat back.
 - b. Each seat shall be a minimum of 38 inches in height measured from the interior floor of the school bus to the top of the back cushion.
 - c. Seat spacing shall meet the requirements of 49 CFR 571.222, October 2006 (no later amendments or editions), published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D. C. 20402-9328, incorporated by reference and on file with the Department. Seat spacing shall not be less than 24 inches between the front of a seat back cushion to the back surface of the cushion on the preceding seat. Seat spacing shall be measured at cushion height, at the center of the seat, on a plane parallel to the center line of the bus. The seat upholstery may be placed against the seat cushion padding, but without compressing the padding, before measurement is taken.
 - d. The school bus driver's seat shall be adjustable, without the use of tools, both

vertically and horizontally for a minimum of 4 inches. Seats with vertical adjustments are not required on Types A and B school buses.

27. Service door:

- a. The service door shall be located on the right side of the school bus opposite the school bus driver and within direct view of the school bus driver when seated in the school bus driver's seat. Types A and B school buses are exempt from this provision.
- b. The service door shall have a minimum horizontal opening of 24 inches and a minimum vertical opening of 68 inches. Type A school buses shall have a service door with a minimum opening of 1200 square inches.
- c. Windows in the upper and lower panels of the service door shall be made of safety glass. The bottom of each lower window panel shall be no more than 10 inches from the top surface of the lower step of the service entrance. The top of each upper window panel shall be no more than 6 inches below the top of the service door. Type A buses are exempt from this provision.
- d. To protect passengers' fingers, a flexible rubber material shall be attached by number 10 3/4 inch metal screws to the opening and closing edges of the service door. Type A school buses are exempt from this provision.
- e. The service door shall open towards the exterior of the school bus. A Type A school bus is exempt from this provision if the service door is provided by the school bus chassis manufacturer.
- f. A header pad, filled with a material to protect against injury, shall be attached to the top edge of the frame of the service door. The header pad shall be at least 3 inches wide and 1 inch thick and extend the full width of the service entrance.
- g. A Type A school bus with the chassis manufacturer's standard service entrance is exempt from subsections (27)(a) through (27)(d).

28. Steps:

- a. The risers of the steps in the service entrance shall be equal. When plywood is laid over the steel floor of the school bus, the height of the top step may be increased by the thickness of the plywood.
- b. The first step at the service entrance shall be no less than 10 inches and no more than 16 inches from the ground.
- c. Steps shall be enclosed in the school bus body.
- d. Steps shall not extend beyond the side of the school bus body.
- e. A handrail not less than 10 inches in length shall be provided inside the doorway.

29. Step treads:

- a. All steps, including the floor-line platform area, shall be covered with ribbed or non-skid floor-covering material that is mounted on a metal plate.
- b. The metal back of the step tread shall be a minimum 24-gauge cold rolled steel and shall be permanently bonded to the ribbed or non-skid material.
- c. If ribbed material is used, the ribbed design shall run from the risers toward the service entrance. Each step tread shall have a 1 1/2 inch white nosing.

30. Stirrup steps: There shall be a handle and at least one folding stirrup step or

recessed foothold located on each side of the front of a school bus for accessibility for cleaning the windshield and lamps. Type A school buses are exempt from this provision.

31. Stop signal arm:

- a. School buses shall be equipped with a stop signal arm on the left side of the school bus body that extends 90° from the school bus body when opened.
- b. The stop signal arm shall be either air or electrically driven, and meet the requirements of Standard J1133, November 2004 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.
- c. The stop signal arm shall be an 18-inch octagon, constructed of a red material that reflects light, with the word “STOP” printed on both sides in white letters not less than 5 inches high. Additionally, the word “STOP” may be illuminated by a light-emitting diode system on both sides of the stop signal arm.

32. Sun shield: An interior adjustable transparent sun shield or visor not less than 6 inches x 30 inches with a finished edge shall be installed over the windshield in the driver’s compartment. School buses with a gross vehicle weight rating of 10,000 pounds or less are exempt from this provision.

33. Tailpipe:

- a. The tailpipe shall extend to, but not more than 2 inches beyond, the outer edge of the rear bumper;
- b. The tailpipe shall exit in the rear of the vehicle behind the rear drive axle, and shall be placed according to the manufacturer’s specifications; and
- c. The tailpipe shall not exit beneath any fuel filler location or beneath any emergency door.

34. Undercoating:

- a. The entire underside of the school bus body, including floor sections, cross member and below-floor-line side panels, shall be coated with rust-proofing material for which the material manufacturer has issued to the bus body manufacturer notarized certification that materials meet or exceed all performance and qualitative requirements of paragraph 3.4 of Federal Specification TT-C-520B, Coating Compound, Bituminous, Solvent Type, Underbody (For Motor Vehicles), February 2, 1973 (no later amendments or editions), published by the General Services Administration acting as an agent for the Superintendent of Documents, Washington D.C. 20402, and incorporated by reference and on file with the Department. Modified test procedures shall be used for the following requirements:
 - i. Salt spray resistance – test modified to 5% salt and 1,000 hours,
 - ii. Abrasion resistance, and
 - iii. Fire resistance.
- b. Test panels shall be prepared in accordance with paragraph 4.6.12 of Federal Specification TT-C-520B, with a modified procedure requiring that the test shall be made on a 48-hour air-cured film at a thickness recommended by the

- material manufacturer.
- c. Undercoating is not required if the underside of the school bus is constructed of noncorrosive material.
 - d. The undercoating material shall be applied with suitable airless or conventional spray equipment to the recommended film thickness and shall show no evidence of voids in the cured film.
35. Ventilation: An immovable, non-closing exhaust ventilator shall be installed in the school bus roof.
36. Wheel housing:
- a. The wheel-housing opening shall be large enough to allow for the removal of the tire and wheel.
 - b. The wheel housing shall be constructed of 16-gauge steel or fiberglass of equal strength and sealed to the school bus floor.
 - c. The wheel housing shall not extend more than 12 inches above the floor inside the school bus body and shall not extend into the emergency door opening.
 - d. The wheel housing shall provide clearance for tire chains installed on the tires of the driving wheels.
37. Windows: Each side window in the passenger compartment of a school bus body shall provide an unobstructed opening of at least 190 square inches when the window is open.
38. Windshield washer system: A windshield washer system that provides an application of cleaning solution to the windshield shall be installed.
39. Windshield wipers:
- a. A windshield wiping system with a minimum of two speeds shall be provided.
 - b. The windshield wipers shall be operated by one or more air or electric motors.

R13-13-108. Inspection, Maintenance, and Alterations

- A. A school bus shall be inspected by the Department before the school bus is introduced into Arizona to transport passengers.**
- 1. After inspecting a school bus, the Department shall place a decal that contains a number used by the Department to identify the school bus above the school bus driver's side window in the driver's compartment. This decal shall not be removed from the school bus while it is operated in Arizona except by the Department. Before the school bus is transferred or retired from service, the school bus owner shall contact the Department to have this decal removed.**
 - 2. If the Department finds that no major defect exists on a school bus, the Department shall place a safety inspection decal that contains the month and year of inspection on the right side of the centerline of the windshield of the school bus in a position that does not interfere with the school bus driver's line of vision.**
 - 3. If the Department finds a major defect on the school bus, the Department shall place the school bus out of service. Before the school bus may be placed back into service, the Department shall reinspect the school bus to determine that the major defect has been corrected. If the major defect has been corrected, the Department shall place a safety inspection decal on the school bus in accordance with subsection (A)(2).**
 - 4. If the Department finds a minor defect on a school bus, the Department shall issue an inspection order, but the school bus may be operated to transport passengers while the minor defect is being corrected. A copy of the inspection order shall be returned to the Department within 15 working days from the date of inspection and shall show that the minor defect has been corrected unless, in accordance with the provisions of subsection (A)(5), the school bus owner obtains an extension of time to correct the minor defect.**
 - 5. Upon receipt of a written request from the school bus owner, the Department shall grant one or more extensions of time to correct a minor defect if:**
 - a. The school bus owner submits to the Department written documentation that the:**
 - i. School bus owner's action or inaction did not cause or contribute to the delay in completing the repair;**
 - ii. School bus owner has secured a written estimated expedited delivery or completion date from the provider of the materials or services required to complete the repair; and**
 - iii. School bus owner made reasonable attempts to secure the materials or services, or materials or services of equivalent quality, at a substantially similar price from alternate sources; and**
 - b. The Department determines that an extension of time to correct the minor defect will not increase the probability of an accident involving the school bus or passengers or the risk of injury to the school bus driver or passengers.**
 - 6. Each extension of time shall be for 60 days or less. The Department shall determine the length of each extension of time after giving consideration to the information provided under subsection (A)(5)(a). When the minor defect is**

corrected, the school bus owner shall return to the Department a copy of the inspection order issued by the Department.

7. If a minor defect on a school bus is not corrected within 15 working days or at the end of an extension period, if applicable, the Department shall remove the safety inspection decal and the school bus shall be placed out of service until further inspection by the Department shows that the minor defect is corrected.

B. The Department shall use the following criteria to determine whether a major or minor defect is present on a school bus introduced into Arizona on or after February 16, 1996. For a school bus introduced into Arizona before that date, the Department shall determine whether the school bus is in an unsafe condition by using the following criteria or those at A.A.C. R17-4-612. A defect that causes a school bus introduced into Arizona before February 16, 1996 to be in an unsafe condition shall be deemed a major defect as defined in this Article.

<u>INSPECTION ITEM</u>	<u>MAJOR DEFECT</u>	<u>MINOR DEFECT</u>
<u>Air conditioning system, if installed</u>	<u>Missing hose covers or trim panels</u> <u>Missing air conditioning louvres</u> <u>Loose or missing air conditioning mounting fasteners</u> <u>Refrigerant leaks from evaporators or hoses in the interior of the bus</u> <u>Broken compressor brackets</u> <u>Broken mounting bolts</u> <u>Electrical wiring hanging out of evaporator covers</u> <u>Missing evaporator covers</u> <u>Missing air diffusers</u> <u>Evaporators not secured to ceiling or bulkhead</u>	<u>Broken or loose evaporator covers</u> <u>Unsecured refrigerant hoses</u> <u>Loose, missing or severely cracked belts</u>
<u>Alarm, back-up, if installed</u>		<u>Low volume</u> <u>Not working</u>
<u>Auxiliary fan, if installed</u>	<u>Obstructs school bus driver's view of any mirror</u> <u>Used in place of defrosting or defogging system</u> <u>Not covered by protective cage</u>	<u>Incorrect size</u> <u>Not controlled by independent switch</u>
<u>Battery (Types C and D buses only)</u>	<u>Not mounted according to the manufacturer's instructions</u>	<u>Incorrect or no identification</u>
<u>Belt cutter</u>	<u>Missing</u>	
<u>Body fluid cleanup kit</u>	<u>Absence of body fluid cleanup kit</u> <u>Any item missing from body fluid cleanup kit</u>	

<u>Brakes, compressed air</u>	<u>Inoperative or missing visual or audible low air signal</u> <u>Compressed-air gauge missing</u> <u>Grease or oil leakage into brake system</u> <u>Exposed or damaged ply on any air hose</u> <u>Air capacity less than 90 pounds per square inch at idle speed</u> <u>Wet-reservoir valve missing or inoperative</u> <u>Leaking, cracked, or broken hose or connection</u> <u>Audible air leak</u> <u>Pushrod exceeds limitation</u> <u>Low-air warning system does not activate at 60 psi and remains activated at less than 60 psi</u>	
<u>Brakes, hydraulic-assisted</u>	<u>Inoperative or missing visual or audible signal</u>	
<u>Brakes, emergency-brake system</u>	<u>Inoperative</u> <u>Does not activate when service brake system reaches 20 to 40 pounds psi</u>	
<u>Bumpers</u>	<u>Break or rip</u> <u>Loose bumper</u> <u>Foothold or handle present on rear bumper</u>	<u>Not painted black</u>
<u>Cooling system</u>		<u>Leak in system</u> <u>Fluid level in radiator not full</u>
<u>Crossing control arm, if installed</u>	<u>Has sharp edges or projections that could injure a student</u> <u>Will not retract</u>	<u>Not working</u> <u>Fails to open completely</u>
<u>Defroster</u>	<u>Inoperative</u> <u>Ventilation opening blocked</u>	

<u>Drive shaft</u>	<u>Absence of protective metal guard installed by the manufacturer around the drive shaft to any driving axle</u>	
<u>Dust boots</u>	<u>Missing, torn, split, or loose around floor-mounted gear shift, parking brake handle, or steering column.</u>	
<u>Emergency warning devices</u>	<u>Having fewer than two operable</u>	<u>Missing one</u>
<u>Emergency door</u>	<u>Inoperative latch</u> <u>Broken or missing portion of seal around door</u> <u>Window not of safety glass</u> <u>Inoperative warning device</u> <u>Lock is not the ignition shut-off type</u>	<u>No header pad</u>
<u>Emergency exit</u>	<u>Inoperative warning device or latch on all emergency</u> <u>exits except roof exit</u> <u>Not properly identified</u> <u>Header pad missing or damaged</u> <u>Broken seal around window</u>	<u>Inoperative roof exit</u>
<u>Engine compartment</u>	<u>Inoperative hood latch</u>	<u>Deterioration of hose, belt, or wiring</u> <u>Deterioration of battery hold-down clamp, corrosive acid buildup on terminal</u>
<u>Exhaust system</u>	<u>Exhaust leak</u> <u>Exhaust tailpipe extends more than 2 inches beyond the outer edge of the rear</u> <u>bumper or fails to terminate flush with the outside edge of the school bus body in the rear</u> <u>of the school bus</u>	<u>Exhaust pipe bracket not attached to the chassis and the tailpipe</u> <u>End of tailpipe pinched or bent</u>

<u>Exterior paint</u>		<u>Exposed metal or base primer</u> <u>Incorrect color</u>
<u>Fire extinguisher</u>	<u>Absence of fire extinguisher</u> <u>Not at full charge</u>	<u>Not mounted in required position</u>
<u>First-aid kit</u>	<u>Absence of first-aid kit</u> <u>Three or more items missing from first-aid kit</u>	<u>One or two items missing from first-aid kit</u>
<u>Frame</u>	<u>Crack in frame</u> <u>Cracked, loose, or missing body mount or body-mount bolt</u> <u>Welded repair not performed by body or chassis manufacturer or manufacturer's certified agent</u>	
<u>Fuel system</u>	<u>Fuel tank not mounted to the chassis frame or not vented to outside of engine compartment</u> <u>Fuel system extends above chassis frame (does not apply to filler tube or Type A bus)</u> <u>Fuel tank bracket cracked or broken</u> <u>Leaking tank or fuel line</u> <u>Fuel line attached to bottom of fuel tank</u> <u>Missing or improper fuel cap</u>	
<u>Handrail</u>	<u>Handrail does not pass the inspection procedure described in R13-13-107(13)</u>	
<u>Heating system</u>	<u>Heater missing or inoperative</u> <u>Heater line in interior of school bus not covered by protective shield</u> <u>No shutoff valve</u>	<u>Unsecured heater hose</u> <u>Inadequate heat-producing capacity</u>
<u>Horn</u> <u>(Air or electrical)</u>	<u>Missing or inoperative</u>	

<u>Instrument panel</u>	<u>Missing or inoperative ignition power-deactivation switch if the ignition does not use a key.</u> <u>Any inoperative gauge or switch, except auxiliary fan switch</u> <u>Improper illumination</u>	<u>Inoperative auxiliary fan switch</u>
<u>Interior, aisles</u>	<u>Incorrect clearance</u>	
<u>Interior, seats</u>	<u>Broken, cracked, exposed, or loose seat frame</u> <u>Screw or mounting bolt missing</u>	
<u>Interior, floor covering</u>	<u>Hole</u> <u>Improper material</u> <u>Improperly bonded</u> <u>Loose metal trim</u>	
<u>Lamps, clearance</u>	<u>Inoperative</u> <u>Cracked, broken, or missing lens</u>	<u>Incorrect color</u> <u>Dust behind lens</u>
<u>Lamps, head</u>	<u>Low beam inoperative</u> <u>Not mounted as required by 49 CFR 393.24</u> <u>Both high beams inoperative</u>	<u>One high beam inoperative</u> <u>Inoperative dimmer switch on a bus not operated when head lamps are required</u> <u>Cracked, broken, or missing lens</u>
<u>Lamps, back-up</u>	<u>Inoperative</u>	<u>Incorrect color</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, interior Over aisle</u>		<u>Inoperative</u> <u>Cracked, broken, or missing lens</u>
<u>Lamps, interior Over step-well</u>	<u>Inoperative</u>	<u>Cracked, broken, or missing lens</u>
<u>Lamps, turn signal</u>	<u>Inoperative</u>	<u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u> <u>Incorrect size</u> <u>Incorrect location</u>

<u>Lamps, strobe, if installed</u>	<u>Pilot or strobe lamp missing or inoperative</u> <u>Cracked, broken, or missing lens</u> <u>Incorrect color</u> <u>Incorrect location</u>	
<u>Lamps, identification</u>		<u>Inoperative</u> <u>Incorrect color</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, hazard</u>	<u>Inoperative</u>	
<u>Lamps, stop</u>	<u>Both inoperative</u>	<u>One inoperative</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, tail</u>	<u>Both inoperative</u>	<u>One inoperative</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, side marker</u>		<u>Inoperative</u> <u>Incorrect color</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, alternately flashing signal</u>	<u>One or more inoperative lamps</u>	<u>Incorrect color</u> <u>Lamp hood missing</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lettering and numbering</u>		<u>Missing any lettering or numbering</u> <u>Incorrect size, color, or location</u> <u>Unauthorized sign, letter, or object</u>

<u>Mirrors, cross-view</u>	<u>Missing</u> <u>Broken or loose mounting</u> <u>Broken or clouded glass</u>	
<u>Mirrors</u>	<u>Interior or exterior mirror missing</u> <u>Loose or broken mounting bracket</u> <u>Crack, break, or flaking of reflective material affixed to back of mirror glass</u> <u>Crack or break of mirror glass</u> <u>Loose or missing mounting bracket bolt or screw</u> <u>Incorrect size</u> <u>Do not meet safety standards contained in 49 CFR 571.111</u>	
<u>Miscellaneous</u>	<u>Object not secured inside the school bus</u> <u>Any item noted by the Department that could cause injury or present a danger to a passenger or school bus driver</u>	<u>Any item noted by the Department that needs to be repaired because it could interfere with the safe operation of the school bus but that is not a major defect</u>
<u>Noise suppression switch</u>	<u>Out of service</u> <u>Malfunctioning</u>	
<u>Parking brake</u>	<u>Inoperative, missing part, or not in proper adjustment</u>	
<u>Restraining barrier</u>	<u>Missing</u> <u>Incorrect size</u> <u>Loose</u>	
<u>Rub rails</u>	<u>Missing more than one</u> <u>Loose or dangling</u>	<u>Missing one</u> <u>Incorrect location</u> <u>Incorrect color</u> <u>Incorrect width</u>

<u>School bus body</u>	<u>Damage resulting in cut or rip to the exterior of school bus body</u> <u>Hole that would allow exhaust gases or dust to enter the passenger compartment</u> <u>Bolt attaching body to chassis loose, broken, or missing</u> <u>Exceeds length or width limitations</u>	<u>Absence of undercoating</u> <u>Loose or missing rivet, screw, or bolt</u>
<u>Seat belt</u>	<u>Absence of driver seat belt or inoperative driver seat belt buckle or retraction system</u> <u>Frayed seat belt material</u>	
<u>Seats</u>	<u>One or more missing</u> <u>Incorrect size or location</u> <u>Driver seat does not meet requirements for adjustment</u> <u>Loose seat cushions</u> <u>Exposed frame</u>	<u>Torn seat cushions</u>
<u>Service door</u>	<u>Incomplete closing of door assembly</u> <u>Does not contain safeguards to prevent accidental opening</u> <u>Window not made of safety glass</u> <u>Broken or cracked window panel</u> <u>Inoperative door control</u> <u>Does not open towards exterior of the school bus</u> <u>Absence of flexible material on outer edge of service door</u> <u>Absence of header pad</u>	

<p><u>Special needs school bus</u></p>	<p><u>Incorrect location or size of special-service entrance</u></p> <p><u>Incorrect size of special-service entrance door</u></p> <p><u>Window not made of safety glass</u></p> <p><u>Inoperative pressure switch</u></p> <p><u>No safety device in wheelchair lift</u></p> <p><u>No restraining barrier on wheelchair-lift platform</u></p> <p><u>Fails to provide wheelchair-securement device or anchorage</u></p> <p><u>Special-service entrance door does not open towards exterior of school bus (except Type A school bus)</u></p> <p><u>Wheelchair lift inoperable</u></p>	<p><u>Drip molding not installed above the special-service entrance</u></p> <p><u>Special-service entrance door not weather-sealed</u></p> <p><u>Incorrect color of door material or panel</u></p> <p><u>Lacks wheelchair emblem</u></p> <p><u>Missing fastening device for special-service entrance door</u></p> <p><u>Dome light missing or inoperative</u></p>
<p><u>Splash guards</u></p>		<p><u>Bottom edge of guard is more than 8 inches above the ground</u></p> <p><u>Does not cover entire width of single or dual tire</u></p> <p><u>Missing splash guard</u></p>
<p><u>Steering</u></p>	<p><u>Distance of movement not within parameters of R13-13-106(22)(c)</u></p> <p><u>Steering wheel does not move freely when turning the wheel</u></p> <p><u>Missing or cracked steering-wheel ring or bracing from center of steering wheel to steering-wheel ring</u></p> <p><u>Steering column not in a fixed position or locking mechanism missing or inoperative on adjustable steering column</u></p> <p><u>Steering column mounting bracket cracked or missing</u></p> <p><u>Loose or missing mounting bolt in steering gear housing</u></p> <p><u>Loose connecting arm on steering gear power source</u></p>	<p><u>Leakage of lubricant</u></p> <p><u>Power-steering belt cracked, frayed, or slipping</u></p> <p><u>Fluid does not fill power steering reservoir to the full level on the dipstick</u></p>

<u>Steps</u>	<u>Loose or missing grab handle in step-well</u> <u>Missing stirrup step or handle</u>	<u>Incorrect distance between steps</u> <u>Incorrect floor covering</u>
<u>Stop signal arm</u>	<u>Any stop arm inoperative</u> <u>Air leak</u> <u>If equipped with a light-emitting diode system, one or more lights missing</u> <u>Missing any stop arm</u>	<u>Incorrect lettering or color on stop signal arm</u> <u>Incorrect size of stop signal arm</u>
<u>Sun shield or visor (if required)</u>	<u>Broken, cracked, or missing</u>	<u>Not transparent</u>
<u>Suspension</u>	<u>Broken, damaged, or missing suspension part</u> <u>U-bolt loose, broken, cracked, or missing</u>	<u>Leaking shock absorber</u>

<u>Tires</u>	<u>Tires on same axle not of the same size</u> <u>Combination of bias and radial tires</u> <u>Tires vary more than one size between axles</u> <u>Tires not correct size for gross vehicle weight rating of school bus</u> <u>Single rear tire on school bus with gross vehicle weight rating of more than 10,000 pounds</u> <u>Regrooved, recapped, or retreaded tire mounted on a front wheel</u> <u>Tread groove depth less than 4/32 of an inch, measured in a tread groove on a tire on a front wheel</u> <u>Tire is mounted or inflated so it comes in contact with any part of the school bus or other tire</u> <u>Tread groove depth less than 2/32 of an inch, measured in a tread groove on a tire on a rear wheel</u> <u>Bump, knot, or bulge present on any tire</u> <u>Sidewall is cut, worn, or damaged to the extent that ply cord is exposed</u> <u>Separation of tread from tire casing</u> <u>Exposed ply or belting on any tire</u> <u>Flat tire or audible leak from a tire on any wheel</u> <u>If present, spare tire on Type C or D school bus not mounted outside passenger compartment</u>	
<u>Ventilation</u>	<u>Non-closing exhaust ventilator missing</u>	
<u>Wheel housing</u>	<u>Incorrect size or construction of wheel housing or opening</u>	

<u>Wheels</u>	<u>Not correct size for gross vehicle weight rating of school bus</u> <u>Loose or missing lug nut</u> <u>Broken stud bolt</u> <u>Crack or welded repair in wheel assembly</u>	<u>Not painted black</u>
<u>Windows</u>	<u>Not of safety glass</u> <u>Opening too small</u> <u>Cracked or broken</u> <u>Placement of non-transparent material</u> <u>Inoperative latch</u>	
<u>Windshield</u>	<u>Placement of non-transparent material</u> <u>Crack, chip, or pitting that interferes with the school bus driver's vision</u>	<u>Crack, chip or pitting that does not interfere with the school bus driver's vision</u>
<u>Windshield washer system</u>	<u>Missing</u>	<u>Low or no cleaning solution</u>
<u>Windshield wipers</u>	<u>Inoperative or missing wiper on school bus driver's side</u> <u>Inoperative or missing wiper on side opposite the school bus driver</u>	<u>Inoperative speed control</u> <u>Split or hardened wiper blade</u>
<u>Wiring</u>	<u>Incorrect color or number coding</u> <u>Wiring circuit not protected by fuse or circuit breaker</u> <u>One or more non-metal grommets missing</u> <u>Electrical wires outside the school bus body improperly secured</u>	

C. A school bus shall be inspected annually, according to a schedule established by the Department and the standards contained in subsections (A) and (B) and this section.

1. If the Department finds a major defect, the Department shall remove the current safety inspection decal and replace with a new safety inspection decal only after the major defect is repaired.
2. If the Department finds a minor defect, the Department shall remove the current safety inspection decal and replace with a new safety inspection decal and allow the school bus owner to make repairs in accordance with the provisions at

R13-13-108(A)(4) through (A)(7).

D. A school bus driver shall perform the following operations checks and tasks on the school bus:

1. Before a school bus is operated for the first time each day, conduct a pre-trip operations check of the school bus to determine that the following are operational and are not damaged:
 - a. All lamps, including alternately flashing, back-up, clearance, hazard, head, identification, interior, side marker, stop, tail, turn signal, and strobe lamps, if any, and emergency warning devices;
 - b. Tires, wheels, and wheel fasteners;
 - c. Service door;
 - d. Steps and step wells;
 - e. Emergency exits and signals;
 - f. Emergency doors and signals;
 - g. Wheelchair lift and wheelchair lift dome lamp;
 - h. Wheelchair-securement devices;
 - i. Wheelchair-securement anchorages;
 - j. Special-service entrance door;
 - k. Special-service entrance door signal;
 - l. Windows;
 - m. Windshield;
 - n. Windshield wipers;
 - o. Instrument panel and gauges;
 - p. Service brakes;
 - q. Service brake warning devices;
 - r. Parking brake;
 - s. Bumpers;
 - t. Seats and seat frames;
 - u. Floor coverings;
 - v. School bus body;
 - w. Engine fluid levels;
 - x. Engine compartment steering components;
 - y. Stop arm;
 - z. Horn;
 - aa. Mirrors;
 - bb. Engine fluid gauges;
 - cc. Noise suppression switch;
 - dd. Child alert notification system, if installed;
 - ee. Crossing control arm, if installed; and
 - ff. Air conditioning system, if installed.
2. Each time a pre-trip operations check of a school bus is conducted, check all emergency equipment to determine that the emergency equipment complies with the standards at R13-13-107(11) and R13-13-110.
3. Each time a school bus is operated subsequent to the first time the school bus is operated each day, conduct a walk-around operations check to determine whether

- there is an obvious engine fluid leak and the following are operational and are not damaged:
- a. All lamps listed in subsection (D)(1)(a);
 - b. Tires, wheels, and wheel fasteners;
 - c. Bumpers;
 - d. School bus body;
 - e. Windows;
 - f. Stop arm; and
 - g. Windshield.
4. Once daily, sweep and clean the interior of the school bus.
 5. After completing each operations check, the school bus driver shall complete the portions of a written monthly operations check report that provide the following information:
 - a. Date and time of the operations check;
 - b. Name of the school bus driver conducting the operations check;
 - c. Name of the employer;
 - d. Number assigned to the school bus by the school bus owner and painted on the outside of the school bus body; and
 - e. Indication of whether an item is operational, inoperative, or damaged.
 6. A school bus driver who performs an operations check and finds any item listed in subsections (D)(1) through (D)(3) inoperative or damaged shall immediately complete and submit a written repair order to the school bus owner through the employer.
 - a. The school bus owner shall use the standards contained in subsection (B) to determine whether an item reported on a repair order as inoperative or damaged is a major or minor defect.
 - b. If the school bus owner finds that a major defect exists, the school bus owner shall place the school bus out of service until the major defect is repaired.
 - c. If the school bus owner finds that a minor defect exists, the school bus may be used to transport passengers, but the school bus owner shall repair the defect in accordance with the provisions at R13-13-108(A)(4) through(A)(7). Time in which to make the minor repair shall be calculated from the date of the written repair order.
 7. After a school bus makes its final trip on the last day the school bus is driven in a particular month the school bus driver operating the school bus shall submit the written monthly operations check report to the school bus owner through the employer.
- E. In addition to the operations checks described in subsection (D), a school bus owner shall systematically inspect, repair, and maintain, or cause to be systematically inspected, repaired, and maintained, all parts of a school bus chassis and body described in Sections R13-13-106 and R13-13-107 and any other parts and accessories that may affect safe operation of the school bus. The school bus owner shall ensure that the maintenance of a school bus and repair of major defects is done by:
1. An ASE-certified technician,

2. An individual working under the supervision of an ASE-certified master school bus technician,
3. An individual with at least one year of participation in a school bus manufacturer-sponsored or commercial vehicle maintenance training program, or
4. An individual with at least one year of experience as a school bus mechanic.

F. Records

1. A school bus owner shall maintain the following records in a separate file for each school bus for as long as the school bus is in operation in Arizona:
 - a. Number assigned to the school bus by the school bus owner,
 - b. Name of the school bus body manufacturer,
 - c. Name of the school bus chassis manufacturer,
 - d. Identification number of the school bus located in the driver's compartment,
 - e. Year the school bus body was assembled upon the school bus chassis, and
 - f. Size of the tires placed on the school bus.
2. A school bus owner shall maintain all records of initial inspection, subsequent inspections, and repairs and maintenance procedures performed on the school bus for three years from the date of inspection, repair, or maintenance. The school bus owner shall ensure that all records of repairs and maintenance procedures include verification from the owner of the business responsible for the repairs and maintenance procedures that the individual who actually performs the repairs and maintenance procedures is qualified under subsection (E).
3. If a school bus is sold, the school bus owner shall transfer the records required by subsections (F)(1) and (F)(2) to the purchaser.
4. A school bus owner shall maintain monthly operations check reports for three months from the date of the report.

G. Alterations

1. Before a school bus owner alters a school bus, the school bus owner shall submit a request in writing to the Department describing the proposed alteration and the reason for the proposal.
2. Within 60 days of receiving a request for alteration, the Department shall inform the school bus owner in writing whether the request has been approved or denied. The Department shall base its decision to approve or deny on an assessment of whether the proposed alteration affects the operations of a school bus, complies with the statutes and rules applicable to school buses, or affects the health, safety, or welfare of any individual.

R13-13-109. Time-frames for Making Certification Determinations

- A.** For certification as a school bus driver, the time-frames required by A.R.S. § 41-1072 et seq. are:
1. Overall time-frame: 60 days
 2. Administrative completeness review time-frame: 45 days
 3. Substantive review time-frame: 15 days
- B.** An administratively complete application for certification as a school bus driver consists of all the information and documents listed in R13-13-102(A).
- C.** An administrative completeness review time-frame, as described in A.R.S. § 41-1072(1) and listed in subsection (A)(2), begins on the date the Department receives an application.
1. If the application is not administratively complete when received, the Department shall send a notice of deficiency to the applicant. The deficiency notice shall state the documents and information needed to complete the application.
 2. Within 120 days from the postmark date of the deficiency notice, the applicant shall submit to the Department the missing documents and information. The time-frame for the Department to finish the administrative completeness review is suspended from the postmark date of the deficiency notice until the date the Department receives the missing documents and information.
 3. If the applicant fails to provide the missing documents and information within the time provided, the Department shall close the applicant's file. An applicant whose file is closed and who wants to be certified shall apply again under R13-13-102.
 4. If the application is administratively complete, the Department shall send a written notice of administrative completeness to the applicant.
- D.** A substantive review time-frame, as described in A.R.S. § 41-1072(3) and listed in subsection (A)(3), begins on the postmark date of the notice of administrative completeness.
1. During the substantive review time-frame, the Department may make one comprehensive written request for additional information.
 2. The applicant shall submit to the Department the additional information identified in the request for additional information within 20 days from the postmark date of the request for additional information. The time-frame for the Department to finish the substantive review of the application is suspended from the postmark date of the request for additional information until the Department receives the additional information.
 3. Unless an applicant requests that the Department deny certification within the 20-day period in subsection (D)(2), the Department shall close the file of an applicant who fails to submit the additional information within the 20 days provided. An applicant whose file is closed and who wants to be certified shall apply again under R13-13-102.
 4. When the substantive review is complete, the Department shall inform the applicant in writing of its decision whether to certify the applicant.
 - a. The Department shall deny certification if it determines that the applicant

does not meet all substantive criteria for certification required by statute and rule. An applicant who is denied certification may appeal the Department's decision under A.R.S. § 41-1092 et seq. and any rules made under A.R.S. § 41-1092.01(C)(4).

- b. The Department shall grant certification if it determines that the applicant meets all substantive criteria for certification required by statute and rule.

R13-13-110. First-aid Equipment

No later than 180 days after the effective date of these rules, a school bus in Arizona shall meet the requirements of this Section.

1. First-aid and body-fluid cleanup kits shall be mounted in a school bus in accordance with R13-13-107(11)(a).
2. First-aid kit: A school bus shall be equipped with a removable first-aid kit that has a weatherproofing seal around the lid to prevent moisture or dust from entering the first-aid kit, is clearly labeled as a first-aid kit, and contains the following:
 - a. Two - 1 inch x 2 1/2 inch yards adhesive tape rolls,
 - b. 24 - Sterile gauze pads 3 inches x 3 inches,
 - c. Eight - 2 inch adhesive bandages,
 - d. 10 - 3 inch adhesive bandages,
 - e. Two - 2 inch x 6 inch sterile gauze roller bandages,
 - f. Four - Triangular bandages approximately 40 inches x 36 inches x 54 inches with two safety pins,
 - g. Three - Sterile gauze pads at least 24 inches x 24 inches,
 - h. Three - Sterile eye pads,
 - i. One - Rounded-end scissors,
 - j. One - Pair of non-latex gloves, and
 - k. One - Mouth-to-mouth airway.
3. Body fluid or bloodborne-pathogen cleanup kit: A school bus shall be equipped with a removable body-fluid or bloodborne-pathogen cleanup kit that is sealed, clearly labeled as a body-fluid or bloodborne-pathogen cleanup kit, and contains the following:
 - a. One - Pouch of solidifier with chlorine,
 - b. One - Pick-up scoop with scraper,
 - c. One - Pair of non-latex gloves,
 - d. Two - Disinfectant hand wipes (antimicrobial),
 - e. Two - Plastic disposal bags with ties (biohazard),
 - f. Two - Germicidal towelettes effective against human immunodeficiency virus and tuberculosis,
 - g. Two - Paper crepe towels, and
 - h. One - Easy to follow instructions.

**ARTICLE 2. MINIMUM STANDARDS FOR SCHOOL BUSES OPERATED ON
ALTERNATIVE FUEL**

R13-13-201. Minimum Standards for Compressed Natural Gas Fuel Systems

A. In addition to the definitions in R13-13-101, in this Article, unless otherwise specified:

“AGA” means the American Gas Association.

“ANSI” means the American National Standards Institute.

“Angle of departure” means the area above an imaginary line that extends from the bottom outside edge of the rear bumper on a vehicle to the point at which a tire on the vehicle’s rear drive axle touches the ground.

“Appurtenance” means an item connected to an opening of a natural-gas pressure vessel to make the natural-gas pressure vessel gas-tight. This includes pressure relief devices, shutoff, backflow, excess-flow, and internal valves, liquid-level and pressure gauges, and plugs.

“Approved” means acceptable to the Department.

“ASE” means National Institute of Automotive Service Excellence.

“Bracket” means rubber-lined, hoop and cradle mounting hardware supplied or approved by a pressure-vessel manufacturer to hold a natural-gas pressure vessel in a rack.

“CNG” means compressed natural gas, a combustible mixture of hydro-carbon gases and vapors, principally methane, that is reduced in volume by pressure for use as a vehicular fuel.

“Fuel-distribution assembly” means a device that regulates the flow of fuel from a natural-gas pressure vessel to a vehicle engine.

“Fuel line” means a pipe, tubing, or hose, and all related fittings through which natural gas passes on a vehicle.

“Installer” means a person who converts a school bus from the use of gasoline to the use of CNG by attaching a natural-gas fuel system to the school bus after the school bus is manufactured.

“Listed” means included in a publication of an approved organization that is concerned with product evaluation, conducts periodic inspection of equipment or material, and includes equipment or material in the approved organization’s publication only if the equipment or material complies with appropriate standards or performs in a specified manner.

“NFPA” means the National Fire Protection Association, which is located at 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, and which is accessible at (617) 770-3000 and www.nfpa.org.

“NGV-1” means specific standards set by the American National Standards Institute

and American Gas Association for the refueling connection device of a natural-gas vehicle.

“NGV-2” means specific standards set by the American National Standards Institute and American Gas Association for a vehicle-on-board natural-gas pressure vessel.

“Natural gas” means a combustible mixture of hydrocarbon gases and vapors, principally methane.

“Natural-gas fuel system” means a group of items including a pressure vessel and all attached valves, piping, and appurtenances that form a network for distributing natural gas to a vehicle engine.

“Operating pressure” means the internal force that a manufacturer intends for a natural-gas pressure vessel to achieve during normal operation of the vehicle to which the natural-gas pressure vessel is attached.

“Out-of-service” means not compliant with these rules, NFPA 52, or manufacturer's instructions for installation, maintenance, or repair.

“Owner” means a private business, school, or school district that owns a school bus.

“PSI” means pound per square inch.

“Pressure-relief device” means a mechanism that is installed in a natural-gas pressure vessel or integrated with a valve, that is operated by temperature, pressure, or both, and that releases the CNG in the natural-gas pressure vessel in specific emergency conditions. A pressure-relief device for a U.S. Department of Transportation or Canada Transport natural-gas pressure vessel also includes a mechanism capable of protecting a partially charged natural-gas pressure vessel.

“Pressure vessel” means a cylinder that is part of a natural-gas fuel system and that is constructed, inspected, and maintained in accordance with U.S. Department of Transportation or Canada Transport regulations or ANSI/AGA NGV2, Basic Requirements for Compressed Natural Gas Vehicle (CNGV) Fuel Containers, or CSA B51, Boiler, Pressure Vessel and Pressure Piping Code.

“Pressure-vessel valve” means a mechanical device connected directly to a natural-gas pressure vessel opening that regulates the flow of CNG from the natural-gas pressure vessel to the vehicle engine.

“Rack” means a metal structure that surrounds a natural-gas pressure vessel mounted on a vehicle and is secured to the vehicle frame by a method capable of withstanding a static up, down, left, right, forward, or backward force of eight times the weight of the fully pressurized natural-gas pressure vessel.

“UL” means the Underwriters' Laboratory, Inc.

B. Applicability and enforcement date of this Section

1. This Section applies to school buses that are manufactured to use only gasoline or diesel fuel and are converted to use CNG, in whole or in part.
2. The Department shall enforce this Section beginning 180 days after it is filed with the Office of the Secretary of State. After the beginning enforcement date, a

- school bus that is manufactured to use only gasoline or diesel fuel and is converted to use CNG, in whole or in part, shall meet the requirements of this Section when the school bus is introduced into Arizona or when the school bus is converted to natural-gas power. A school bus introduced into Arizona and powered in whole or in part by CNG before the beginning enforcement date of this Section shall meet the requirements of this Section or those at A.A.C. R17-4-611.
3. After the beginning enforcement date of this Section, the Department shall not approve a school bus manufactured to use only gasoline or diesel fuel and converted to use CNG, in whole or in part, unless the natural-gas fuel system meets the requirements of this Section.

C. Insurance

1. An owner shall not contract with an installer unless the installer has insurance coverage provided by a comprehensive general liability broad form insurance policy that is approved by the Department. The insurance policy shall include coverage for liability resulting from:
 - a. Completed installation operations,
 - b. Harm that arises on the installer's premises, and
 - c. Breach of contract by the installer.
2. In addition to the liability coverage described in subsection (C)(1), an owner shall ensure that either:
 - a. The installer has insurance coverage for liability resulting from harm that arises from subcontracted work performed by an independent contractor, or
 - b. An independent contractor who performs work for the installer under an agreement has an insurance policy that provides coverage for liability resulting from harm caused by the independent contractor's work.
3. An owner shall not contract with an installer unless the installer has an insurance policy that provides at least \$1 million liability coverage per occurrence both for bodily injury and for property damage.
4. An owner shall not contract with an installer unless the issuer of the installer's insurance policies described in subsections (C)(1) through (C)(3) names the Department as an additional insured on each policy and keeps the Department informed of any change in the status of each policy.
5. An owner shall obtain the Department's approval of the installer's insurance policy by submitting proof of the insurance described in subsections (C)(1) through (C)(3) to the Department before entering a contractual agreement with the installer for the installation of a natural-gas fuel system on a school bus.
6. If an owner acts as an installer, the owner shall maintain the insurance required by this Section.
7. The Department shall approve an installer's insurance policy, proof of which is submitted by an owner in accordance with subsection (C)(5), if the policy conforms to the requirements in subsections (C)(1) through (C)(3). The Department shall send written notice of its decision to approve or disapprove the installer's insurance policy to the owner within 15 days from receipt of the proof of insurance.

D. General requirements for installing a natural-gas fuel system

1. Converting a school bus to use of CNG, whether in whole or in part, is not an alteration as defined in R13-13-101.
2. Unless specifically provided otherwise in this Section, when installing a natural-gas fuel system, an installer shall use parts and equipment and perform work in a manner that meets or exceeds the standards of NFPA 52, Standard for Compressed Natural Gas (CNG) Vehicular Fuel Systems, 1995 (and no later editions or amendments), Quincy, MA, which is incorporated by this reference and on file with the Department and the Office of the Secretary of State.
3. An installer shall use only UL-listed or AGA-approved carburetor equipment when installing a natural-gas fuel system on a school bus.
4. An installer shall meet or exceed the recommended guidelines provided by the manufacturers of all parts of a natural-gas fuel system when installing the natural-gas fuel system on a school bus.
5. An installer shall ensure that installation of a natural-gas fuel system on a school bus is performed by an individual who has proof of training provided by the manufacturer of the natural-gas fuel system or ASE alternative fuels certification.
6. If a school bus is converted from the use of gasoline or diesel fuel to the dedicated use of CNG, the installer shall remove the gasoline or diesel-fuel tank and accompanying gasoline or diesel-fuel system parts from the school bus.

E. Natural-gas pressure vessel: An installer shall use only a natural-gas pressure vessel that is certified by its manufacturer as meeting or exceeding the NGV2 standards and as being U.S. Department of Transportation or ANSI listed. An installer shall use the natural-gas pressure vessel manufacturer's recommended bracket.

F. Installing a natural-gas pressure vessel

1. An installer shall securely attach a rack to the frame of a school bus in the following manner:
 - a. By drilling no holes in the school bus frame that exceed the manufacturer's requirements; and
 - b. By using no welding on and applying no heat to the school bus frame.
2. When installing a natural-gas fuel system on a school bus, an installer shall locate the natural-gas pressure vessel and its appurtenances on the vehicle frame as follows:
 - a. Below the driver's or passengers' compartment;
 - b. So no part protrudes:
 - i. In front of the front axle,
 - ii. Beyond the outside face of the rear bumper, or
 - iii. Beyond the sides of the school bus;
 - c. Inside a rack; and
 - d. So the minimum clearance between the road and the lowest part of the natural-gas pressure vessel and its rack on a school bus loaded to its gross vehicle weight rating, is:
 - i. No fewer than 7 inches (17.5 mm) for a school bus with a wheel base fewer than or equal to 127 inches (323 mm); or
 - ii. No fewer than 9 inches (22.5 mm) for a school bus with a wheel base

greater than 127 inches (323 mm).

3. If the natural-gas pressure vessel and its appurtenances are located behind the rear axle of the school bus, in addition to the requirements in subsection (F)(3), an installer shall locate the natural-gas pressure vessel as follows:
 - a. Below the floor line, and
 - b. Above the school bus' angle of departure.

G. Protecting a natural-gas pressure vessel. To protect a natural-gas pressure vessel and its appurtenances from damage, an installer shall:

1. Surround the natural-gas pressure vessel with a stone guard on all sides that are not protected by the natural barriers of the vehicle. The stone guard shall not be attached to the natural-gas pressure vessel. If the stone guard protects a valve, it shall be made of at least 16-gauge steel. If the stone guard does not protect a valve, it shall be made of at least 3/16-in. mesh with openings no greater than 1 in.;
2. Place a resilient, non-absorbent gasket between the natural-gas pressure vessel and its brackets in a manner that prevents the brackets from directly contacting the natural-gas pressure vessel;
3. Ensure that the weight of the natural-gas pressure vessel is not supported, in whole or in part, by an appurtenance; and
4. Place a shield between, but not attached to, the natural-gas pressure vessel and the vehicle exhaust system if the natural-gas pressure vessel or the fuel lines are located fewer than 8 inches from the exhaust system. The shield shall be constructed of at least 18-gauge metal.

H. Safety and check valves: An installer shall equip a natural-gas fuel system with:

1. Either an automatic fuel supply shut-off valve that is placed between the pressure vessel fuel-pressure regulator and the fuel distribution assembly and activated by engine vacuum or oil pressure, or an electronic fuel injector; and
2. Either a manual or automatically controlled shut-off valve that enables the natural-gas pressure vessel to be isolated from the remainder of the natural-gas fuel system. If a manual shut-off valve is used, it shall:
 - a. Have no more than 90° rotation from the opened to the closed position;
 - b. Have a red valve handle;
 - c. Be placed in an accessible location; and
 - d. Have "ESV" printed on the school bus at the access location to the manual shut-off valve, in 2-in. to 4-in., unshaded, red letters.

I. Installation of fuel lines. An installer shall:

1. Use fuel lines constructed of seamless stainless steel that has been tested and certified by the manufacturer to an operating pressure of 3600 PSI with a 4:1 safety factor;
2. Mount and brace fuel lines to the vehicle frame in a manner that minimizes vibration;
3. Secure fuel lines to the vehicle frame at least every 24 inches with rubber-lined fasteners;
4. Protect fuel lines that pass through any structural member with rubber grommets, bulkhead fittings, or both;

- 5. Cause fuel lines that run to the engine to follow the main frame channel; and
- 6. Install an access door that is at least 70 square inches if access to the fill receptacle and fuel pressure gauge is through the school bus body. The words "CNG Fill" shall be printed on the school bus body, immediately above the access door, in 2-in. to 4-in., unshaded letters.
- J.** Installation of Venting System. An installer shall ensure that in addition to meeting the requirements in NFPA 52, all vent exits are aimed toward the ground.

R13-13-202. Inspection and Maintenance of Compressed Natural Gas Fuel Systems

- A.** This Section applies to all school buses that are powered, in whole or in part, by CNG and are introduced into Arizona after the beginning enforcement date of these rules.
- B.** An owner shall not use a school bus equipped with a natural-gas fuel system to transport passengers until the natural-gas fuel system is inspected and approved by the Department. An owner shall notify the Department when the owner obtains a school bus that needs to be inspected for compliance with these rules.
- C.** After the initial inspection conducted by the Department, an owner shall ensure that a school bus equipped with a natural-gas fuel system is inspected annually and under the following special circumstances:
1. When the school bus is involved in an accident;
 2. When the natural-gas pressure vessel may have been damaged;
 3. When natural gas is smelled;
 4. When there is an unexpected loss of gas pressure, rattling, or other indication of looseness; or
 5. When the natural-gas pressure vessel is changed.
- D.** An owner shall ensure that an annual or special-circumstances inspection is conducted by the Department or an individual who has proof of training provided by the manufacturer of the natural-gas fuel system or ASE alternative-fuel certification.
- E.** An owner shall ensure that every inspection of a school bus equipped with a natural-gas fuel system assesses whether the natural-gas fuel system meets the safety standards in 13 A.A.C. 13, and NFPA 52. This assessment shall include:
1. Leak-testing the natural-gas fuel system in compliance with NFPA 52 guidelines;
 2. Verifying that the pressure vessel is designed for storage of CNG;
 3. Verifying that the service life of the natural-gas pressure vessel has not expired;
 4. Verifying that the natural-gas pressure vessel is certified by its manufacturer as meeting or exceeding the NGV2 standards and as being U.S. Department of Transportation or ANSI listed;
 5. Verifying that all parts of the natural-gas fuel system are properly listed or approved; and
 6. Verifying that all parts of the natural-gas fuel system are installed in accordance with the manufacturer's instructions.
- F.** An owner shall ensure that an individual who conducts an inspection of a school bus equipped with a natural-gas fuel system completes a Compressed Natural Gas Safety Inspection Form, which is available from the Department, and certifies that the school bus meets all safety standards in 13 A.A.C. 13, and NFPA 52.
- G.** If it is necessary to condemn a natural-gas pressure vessel, the owner shall:
1. Return the condemned natural-gas pressure vessel to its manufacturer; and
 2. Obtain a certificate from the manufacturer that states ownership of the natural-gas pressure vessel is transferred from the owner to the manufacturer.
- H.** An owner shall maintain each completed Compressed Natural Gas Safety Inspection Form in a separate file for each school bus for the service life of the school bus. If a school bus is transferred from one owner to another, the first owner shall transfer the

completed inspection forms to the second owner.

- I.** An owner shall make the inspection forms maintained under subsection (H) available for review by the Department.

VIEW DOCUMENT

28-3228. School bus drivers; requirements; rules; cancellation

A. A person shall not operate a school bus transporting school children unless the person possesses the appropriate license class for the size of school bus being operated that is issued by the department of transportation, a bus endorsement that is issued by the department of transportation and a school bus certificate that is issued by the department of public safety.

B. To be certified as a school bus driver a person shall do both of the following:

1. Meet and maintain the minimum standards prescribed by this section and rules adopted by the department of public safety in consultation with the school bus advisory council established by section 28-3053.

2. Complete an initial instructional course on school bus driver safety and training including behind the wheel training.

C. The department of public safety in consultation with the school bus advisory council established by section 28-3053 shall adopt rules that establish minimum standards for the certification of school bus drivers. In cooperation with local school districts, the department of public safety shall provide for school bus driver safety and training courses. The standards established shall:

1. Include requirements concerning moral character, knowledge of school bus operation, pupil and motor vehicle safety, physical impairments that might affect the applicant's ability to safely operate a school bus or that might endanger the health or safety of school bus passengers, knowledge of first aid, establishment of school bus safety and training courses, a refresher course to be completed on at least a biennial basis and other matters as the department of public safety and the school bus advisory council established by section 28-3053 prescribe for the protection of the public.

2. Require tests to detect the presence of alcohol or the use of a drug in violation of title 13, chapter 34 that may adversely affect the ability of the applicant to safely operate a school bus.

3. Authorize the performance of hearing tests with or without the use of a hearing aid as provided in 49 Code of Federal Regulations section 391.41.

D. Each person who applies for a school bus driver certificate shall have a valid fingerprint clearance card that is issued pursuant to title 41, chapter 12, article 3.1 and shall submit an identity verified fingerprint card as described in section 15-106 that the department of public safety shall use to process the fingerprint clearance card as outlined in section 15-106.

E. A person who is issued a school bus driver certificate shall maintain a valid identity verified fingerprint clearance card for the duration of any school bus driver certification period.

F. The department of public safety shall suspend a school bus driver certificate if the fingerprint clearance card is invalid, suspended, canceled or revoked.

G. The department of public safety shall issue a school bus driver certificate to an applicant who meets the requirements of this

section. The certificate is valid if the applicant maintains the minimum standards established by this section.

H. The department of public safety may cancel the certificate if the person's license to drive is suspended, canceled, revoked or disqualified. The department of public safety shall cancel the certificate if the person fails to maintain the minimum standards established pursuant to this section. A person whose application for a certificate is refused or whose certificate is canceled for failure to meet or maintain the minimum standards may request and receive a hearing from the department of public safety.

I. The department of public safety shall enforce the rules adopted pursuant to this section.

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41-1713. Powers and duties of director; authentication of records

A. The director of the department shall:

1. Be the administrative head of the department.
2. Subject to the merit system rules, appoint, suspend, demote, promote or dismiss all other classified employees of the department on the recommendation of their respective division superintendent. The director shall determine and furnish the law enforcement merit system council established by section 41-1830.11 with a table of organization. The superintendent of each division shall serve at the concurrent pleasure of the director and the governor.
3. Except as provided in sections 12-119, 41-1304 and 41-1304.05, employ officers and other personnel as the director deems necessary for the protection and security of the state buildings and grounds in the governmental mall described in section 41-1362, state office buildings in Tucson and persons who are on any of those properties. Department officers may make arrests and issue citations for crimes or traffic offenses and for any violation of a rule adopted under section 41-796. For the purposes of this paragraph, security does not mean security services related to building operation and maintenance functions provided by the department of administration.
4. Make rules necessary for the operation of the department.
5. Annually submit a report of the work of the department to the governor and the legislature, or more often if requested by the governor or the legislature.
6. Appoint a deputy director with the approval of the governor.
7. Adopt an official seal that contains the words "department of public safety" encircling the seal of this state as part of its design.
8. Investigate, on receipt, credible evidence that a licensee or registrant has been arrested for, charged with or convicted of an offense that would preclude the person from holding a license or registration certificate issued pursuant to title 32, chapter 26.
9. Cooperate with the Arizona-Mexico commission in the governor's office and with researchers at universities in this state to collect data and conduct projects in the United States and Mexico on issues that are within the scope of the department's duties and that relate to quality of life, trade and economic development in this state in a manner that will help the Arizona-Mexico commission to assess and enhance the economic competitiveness of this state and of the Arizona-Mexico region.
10. Adopt and administer the breath, blood or other bodily substances test rules pursuant to title 28, chapter 4.
11. Develop procedures to exchange information with the department of transportation for any purpose related to sections 28-1324, 28-1325, 28-1326, 28-1462 and 28-3318.
12. Collaborate with the state forester in presentations to legislative committees on issues associated with wildfire prevention, suppression and emergency management as provided by section 37-1302, subsection B.

B. The director may:

1. Issue commissions to officers of the department.
2. Request the cooperation of the utilities, communication media and public and private agencies and any sheriff or other peace officer in any county or municipality, within the limits of their respective jurisdictions when necessary, to aid and assist in the performance of any duty imposed by this chapter.

3. Cooperate with any public or private agency or person to receive or give necessary assistance and may contract for such assistance subject to legislative appropriation controls.
4. Utilize the advice of the board and cooperate with sheriffs, local police and peace officers within the state for the prevention and discovery of crimes, the apprehension of criminals and the promotion of public safety.
5. Acquire in the name of the state, either in fee or lesser estate or interest, all real or any personal property that the director considers necessary for the department's use, by purchase, donation, dedication, exchange or other lawful means. All acquisitions of personal property pursuant to this paragraph shall be made as prescribed in chapter 23 of this title unless otherwise provided by law.
6. Dispose of any property, real or personal, or any right, title or interest in the property, when the director determines that the property is no longer needed or necessary for the department's use. Disposition of personal property shall be as prescribed in chapter 23 of this title. The real property shall be sold by public auction or competitive bidding after notice published in a daily newspaper of general circulation, not less than three times, two weeks before the sale and subject to the approval of the director of the department of administration. When real property is sold, it shall not be sold for less than the appraised value as established by a competent real estate appraiser. Any monies derived from the disposal of real or personal property shall be deposited, pursuant to sections 35-146 and 35-147, in the Arizona highway patrol fund as authorized by section 41-1752, subsection B, paragraph 6.
7. Sell, lend or lease personal property directly to any state, county or local law enforcement agency. Personal property may be sold or leased at a predetermined price without competitive bidding. Any state, county or local law enforcement agency receiving personal property may not resell or lease the property to any person or organization except for educational purposes.
8. Dispose of surplus property by transferring the property to the department of administration for disposition to another state budget unit or political subdivision if the state budget unit or political subdivision is not a law enforcement agency.
9. Lease or rent personal property directly to any state law enforcement officer for the purpose of traffic safety, traffic control or other law enforcement related activity.
10. Sell for one dollar, without public bidding, the department issued handgun or shotgun to a department officer on duty related retirement pursuant to title 38, chapter 5, article 4. Any monies derived from the sale of the handgun or shotgun to the retiring department officer shall be deposited, pursuant to sections 35-146 and 35-147, in the Arizona highway patrol fund as authorized by section 41-1752, subsection B, paragraph 6.
11. Conduct state criminal history records checks for the purpose of updating and verifying the status of current licensees or registrants who have a license or certificate issued pursuant to title 32, chapter 26. The director shall investigate, on receipt, credible evidence that a licensee or registrant has been arrested for, charged with or convicted of an offense that would preclude the person from holding a registration certificate issued pursuant to title 32, chapter 26.
12. Grant a maximum of two thousand eighty hours of industrial injury leave to any sworn department employee who is injured in the course of the employee's duty, any civilian department employee who is injured in the course of performing or assisting in law enforcement or hazardous duties or any civilian department employee who was injured as a sworn department employee rehired after August 9, 2001 and would have been eligible pursuant to this paragraph and whose work-related injury prevents the employee from performing the normal duties of that employee's classification. This industrial injury leave is in addition to any vacation or sick leave earned or granted to the employee and does not affect the employee's eligibility for any other benefits, including workers' compensation. The employee is not eligible for payment pursuant to section 38-615 of industrial injury leave that is granted pursuant to this paragraph. Subject to approval by the law enforcement merit system council, the director shall adopt rules and procedures regarding industrial injury leave hours granted pursuant to this paragraph.

13. Sell at current replacement cost, without public bidding, the department issued badge of authority to an officer of the department on the officer's promotion or separation from the department. Any monies derived from the sale of the badge to an officer shall be deposited, pursuant to sections 35-146 and 35-147, in the department of public safety administration fund to offset replacement costs.

C. The director and any employees of the department that the director designates in writing may use the seal adopted pursuant to subsection A, paragraph 7 of this section to fully authenticate any department records and copies of these records. These authenticated records or authenticated copies of records shall be judicially noticed and shall be received in evidence by the courts of this state without any further proof of their authenticity.

DEPARTMENT OF PUBLIC SAFETY

Title 13, Chapter 13, Article 1, School Bus Minimum Standards

Amend: R13-13-106

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - EXPEDITED RULEMAKING

MEETING DATE: July 10, 2018

AGENDA ITEM: E-3

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF PUBLIC SAFETY (R-18-0701)
Title 13, Chapter 13, Article 1, School Bus Minimum Standards

Amend: R13-13-106

SUMMARY OF THE RULEMAKING

This expedited rulemaking, from the Department of Public Safety (Department or DPS), seeks to amend one rule in A.A.C Title 13, Chapter 13, related to minimum standards for school buses.

Under Section 106, school buses are currently required to be equipped with, at minimum, a 30 gallon fuel tank. Due to advances in vehicle engineering, school bus manufacturers are equipping newer bus models with smaller, more efficient fuel tanks. The Department notes that it cannot identify any necessary, safety related justification for the rule. Accordingly, the Department proposes in this rulemaking to eliminate the 30-gallon minimum requirement.

The Department indicates that the use of expedited rulemaking is justified, as the rulemaking decreases the cost of regulatory compliance by allowing school districts to purchase the newer models and increase fuel efficiency. The Governor's Office provided an exemption from the moratorium on November 30, 2017.

1. Are the rules legal, consistent with legislative intent, and within the agency's statutory authority?

Yes. The Department cites to A.R.S. § 41-1713(A)(4) as general authority for the rules, which states "the Department shall make rules necessary for operation of the Department." In addition, A.R.S. § 28-900(B)(1) provides that school bus rules "may include minimum standards for the design and equipment of school buses."

2. Do the rules establish a new fee or contain a fee increase?

No. The rules do not establish a new fee or contain a fee increase.

3. Does the agency adequately address the comments on the proposed rules and any supplemental proposals?

No. The Department indicates that it has not received any public comments on the rulemaking.

4. Are the final rules a substantial change, considered as a whole, from the proposed rules and any supplemental proposals?

No. No changes have been made between the Notice of Proposed Expedited Rulemaking and the Notice of Final Expedited Rulemaking.

5. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The Department indicates that there is no corresponding federal law.

6. Do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

Yes. The Department indicates that, under A.R.S. § 41-1037(A)(3), general inspection of individual school buses is not technically feasible and thus requires individual authorization.

7. Does the preamble disclose a reference to any study relevant to the rules that the agency reviewed and either did or did not rely upon?

No. The Department did not review or rely upon any study for this rulemaking.

8. Conclusion

If approved, the rulemaking will become effective immediately upon filing with the Secretary of State. Council staff recommends approval of the rulemaking.



ARIZONA DEPARTMENT OF PUBLIC SAFETY

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"Courteous Vigilance"

DOUGLAS A. DUCEY FRANK L. MILSTEAD
Governor Director

April 23, 2018

Ms. Nicole Ong Colyer, Chair
The Governor's Regulatory Review Council
100 N 15th Ave, Ste 402
Phoenix, AZ 85007

Dear Ms. Ong Colyer,

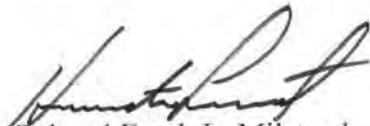
The Department of Public Safety submits a Notice of Final Expedited Rulemaking for Arizona Administrative Code Title 13, *Public Safety*, Chapter 13, *Department of Public Safety–School Buses*, Article 1, Rule 106 for review and approval by the council. The following information is provided pursuant to R1-6-201:

1. Close of Record Date: The rulemaking record was closed on April 13, 2018 at 5:00 p.m., pursuant to the *Notice of Proposed Expedited Rulemaking* following a period for public comment and an oral proceeding. The proposed notice was posted to the Department's website on March 9, 2018. The oral proceeding was held on April 13, 2018; there were no attendees from the public and no written comments received by the close of the rulemaking record.
2. Relation to Five-Year Review Report: This rulemaking is not related to a five-year review report.
3. Establishment of new fees: This rulemaking does not establish new fees.
4. Establishment of fee increase: The rulemaking does not establish a fee increase.
5. Request for immediate effective date under A.R.S. § 41-1032: An immediate effective date is not requested.
6. Evaluations of studies related to the rulemaking: No external studies related to the rulemaking were evaluated.
7. Necessity of Full-time Employees: The rulemaking does not require an increase in full-time employees to implement the rules.

8. List of Documents:

- a. Signed cover letter.
- b. Notice of Final Expedited Rulemaking including the Preamble and rule text.
- c. Governor's Office rulemaking waiver approval.
- d. School Bus Advisory Council meeting agenda and minutes.
- e. Authorizing statutes.

Sincerely,



Colonel Frank L. Milstead
Director

PKS/pks

Enclosures

Address: Arizona Department of Public Safety
POB 6638, Mail Drop 1240
Phoenix, AZ 85009-6638

Telephone:(602) 712-5808

E-mail: llarson@azdps.gov

6. An agency's justification and reason why the rule should be made, amended, repealed, or renumbered, to include an explanation about the rulemaking:

The agency is conducting an expedited rulemaking pursuant to A.R.S. § 41-1027(A)(6); where the rulemaking does not increase the cost of regulatory compliance, increase a fee or reduce procedural rights of persons regulated and amends or repeals rules that are outdated, redundant or otherwise no longer necessary for the operation of state government.

R13-13-106(16)(a) requires amendment to remove an unnecessary regulatory burden which does not have an identifiable correlation to school bus safety and is limiting economic opportunity.

Presently, the rule requires a school bus to be equipped with a 30-gallon fuel tank.

Advancements in vehicle engineering have resulted in vehicles with smaller fuel capacity tanks having the same or greater functional fuel range as older vehicles with larger fuel capacity tanks. Due to this improved fuel efficiency, some vehicle manufacturers are reducing the fuel tank capacity below 30 gallons on certain school bus models. If this rule is not amended, school districts will not be able to purchase these new, more fuel-efficient models, resulting in a lost opportunity for fuel savings by the school districts and a lost economic opportunity for the school bus dealers. The Department is not able to identify a necessary, safety-related justification for maintaining the 30-gallon requirement.

In accordance with A.R.S. § 28-900, the Department consulted with the Arizona School Bus Advisory Council on March 6, 2018 where the council voted and approved the proposed expedited rulemaking.

The Department received a rulemaking waiver from Mr. Tim Roemer, Public Safety Policy Advisor to Governor Ducey on November 30, 2017.

7. A reference to any study relevant to the rule that the agency reviewed and proposes to either rely on or not rely on in its evaluation of or justification for the rule, where the

public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

The Department did not rely on any study in its evaluation of or justification for the rule.

8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

The rulemaking does not diminish a previous grant of authority of a political subdivision of this state.

9. A summary of the economic, small business, and consumer impact:

Pursuant to A.R.S. § 41-1027, the expedited rulemaking process is exempt from this requirement.

10. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

There were no changes made to the rule between the proposed expedited rulemaking and the final expedited rulemaking.

11. An agency's summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

The Department consulted with the School Bus Advisory Council on March 6, 2018 pursuant to A.R.S. § 28-900. The council had no substantive comments relevant to this rulemaking and during the open public comment portion of the agenda no public member from the audience spoke on the rulemaking. The council voted and approved of the rulemaking as presented in the *Notice of Proposed Expedited Rulemaking* at the March 6 meeting.

The Department held an open public comment meeting on April 13, 2018 as stated in the *Proposed Notice of Expedited Rulemaking*; there were no public attendees. There were no written comments received by the close of the rulemaking record on April 13, 2018 at 5:00p.m. as stated in the *Proposed Notice of Expedited Rulemaking*.

12. All agency's shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following

questions:

- a. Whether the rule requires a permit, whether a general permit is used, and if not, the reason why a general permit is not used:**

The rule does not require a permit, but requires each individual school bus to meet the minimum safety standards. School buses are individually inspected by the Department for safety compliance; therefore a general inspection is not possible.

- b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law, and if so, citation to the statutory authority to exceed the requirements of federal law:**

There is no applicable federal law.

- c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:**

No person submitted an analysis to the Department comparing the rule's business competitiveness impact.

- 13. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:**

There are no incorporated by reference materials to this rulemaking.

- 14. Whether the rule previously made, amended, or repealed as an emergency rule. If so, cite the notice published in the *Register* as specified in R1-4-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:**

The rule was not previously made, amended, or repealed as an emergency rule.

- 15. The full text of the rules follows:**

TITLE 13. PUBLIC SAFETY
CHAPTER 13. DEPARTMENT OF PUBLIC SAFETY - SCHOOL BUSES
ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

Section

R13-13-106 Minimum Standards for School Bus Chassis

ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

R13-13-106. Minimum Standards for School Bus Chassis

The chassis of a school bus introduced to Arizona on or after May 31, 2008 shall meet the requirements of this Section. The chassis of a school bus introduced to Arizona before May 31, 2008 shall meet the requirements of this Section or shall be maintained in accordance with the manufacturer’s original specifications.

1. Air cleaner: An engine intake air cleaner shall be installed in the school bus that meets engine specifications defined by the school bus manufacturer.
2. Axles: The front and rear axles and suspension assemblies shall have a gross axle weight rating consistent with that stated by the chassis manufacturer on a notice located in the school bus driver's compartment.
3. Back-up alarm: If installed, an alarm that emits a warning sound when the school bus is backing shall conform to the following:
 - a. The alarm-signaling device shall be of electronic, solid state design and shall emit an audible sound of a minimum of 97 dB(A) measured at 4 feet, 0° access from the source of the sound.
 - b. The alarm-signaling device shall be wired into the backup light circuits and shall emit sound automatically when the gear shift lever is in “reverse” position.
 - c. The alarm-signaling device shall be attached to the school bus chassis or body behind the rear axle.
4. Brakes:
 - a. A school bus with a manufacturer-designed passenger capacity of 60 or less shall be equipped with a service-brake system that uses compressed air or hydraulic assist.
 - b. A school bus with a manufacturer-designed passenger capacity greater than 60 shall be equipped with a service- brake system that uses compressed air.
 - c. In addition to the service-brake system, a school bus shall be equipped with a parking-brake system to keep the school bus from moving when parked.
 - d. The service brakes in a compressed-air system shall be adjusted using the following criteria:

Type	Outside Diameter of Air Chamber	Brake Adjustmen t Limit
6	4 1/2 inches	1 1/4 inches
9	5 1/4 inches	1 3/8 inches
12	5 11/16 inches	1 3/8 inches
16	6 3/8 inches	1 3/4 inches
20	6 25/32 inches	1 3/4 inches
24	7 7/32 inches	1 3/4 inches
30	8 3/32 inches	2 inches
36	9 inches	2 1/4 inches

- e. The service brakes in a “long stroke” clamp type brake system shall be adjusted using the following criteria:

Type	Outside Diameter of Air Chamber	Stroke	Brake Adjustment Limit
12	5 inches	11/16	1 3/4 inches
16	6 3/8 inches		2 inches
20	6 inches	25/32	2 inches
24	7 7/32 inches		2 inches
24*	7 7/32 inches		2 1/2 inches
30	8 3/32 inches		2 1/2 inches

*For 3" maximum stroke type 24 chambers

- f. The service-brake system in a compressed-air system shall contain an emergency-brake system that will activate when the air loss in the service-brake system reaches 20 to 40 pounds per square inch.
- g. A school bus using a compressed-air or hydraulic-assist service-brake system shall be equipped with a signal located in the school bus driver's compartment that emits a continuous audible or visible warning to the school bus driver when:
- The air pressure available in a compressed-air braking system is 60 pounds per square inch or less, or
 - There is a loss of fluid flow from the main hydraulic pump or loss of electric source powering the back-up system in a hydraulic-assist system.
- h. A school bus using a compressed-air service-brake system shall be equipped with one or two illuminated gauges located in the school bus driver's compartment that show the pounds per square inch of compressed air available for the operation of the brake.
- i. A compressed-air brake system with a dry reservoir shall have a one-way valve that will prevent the loss of compressed air between the dry reservoir and the source of compressed air.
- j. A brake system with a wet reservoir shall have a valve located at the bottom of the wet reservoir that operates automatically or can be operated remotely or manually to eject the moisture from the reservoir.
- k. Compressed-air or hydraulic-assist brake lines and booster-assist lines shall be installed in a manner that prevents heat, vibration, and chafing damage.
- l. The brake systems of Types C and D school buses shall be installed so the chassis components can be visually inspected to detect brake lining wear without removal of any of the chassis components.
5. Front bumper: The front bumper shall be positioned at the forward-most part of the school bus and extend to the outer edges of the school bus.

6. Child alert notification system: A school bus may be equipped with an electronic or mechanical child alert notification system. If a school bus is equipped with a child alert notification system, the device shall be installed in a manner that does not interfere with any other existing operating or electrical component. A child alert notification system in a school bus shall not have an override or bypass capability.
7. Clutch: The clutch torque capacity shall be equal to or greater than the engine torque output.
8. Color: The chassis, including wheels and front bumper, shall be painted black. The hood and fenders shall be painted National School Bus Yellow as described in R13-13-107(6).
9. Cooling system: A school bus shall be equipped with a cooling system that maintains the engine temperature operating range required to prevent damage to the school bus engine.
10. Drive shaft: Each section of the drive shaft to the rear driving axle shall be protected by a metal guard around its circumference to reduce the possibility of the drive shaft penetrating through the school bus floor or dropping to the ground.
11. Electrical system:
 - a. Battery:
 - i. The battery shall have a minimum cold-cranking capacity rating equal to the cranking current required by the engine for 30 seconds at 0° F. and a minimum reserve capacity rating of 120 minutes at 25 amperes.
 - ii. The battery shall have a higher capacity than specified in subsection (11)(a)(i) if optional equipment installed on the school bus requires the higher capacity.
 - iii. Because all batteries are to be secured in a sliding tray in the bus body as required by R13-13-107, chassis manufacturers shall mount batteries temporarily on the chassis frame, except that a van conversion or cutaway front-section chassis may be secured in accordance with the manufacturer's standard configuration. However, in all cases the battery cable provided with the chassis shall have sufficient length to allow some slack, and shall be of sufficient gauge to carry the required amperage.
 - b. Alternator:
 - i. All alternators shall conform to the recommended practices of Standard J180, January 2002 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, which is incorporated by reference and on file with the Department.
 - ii. All Type A-2 and Type B buses with a GVWR of 15,000 pounds or less shall have an alternator with a minimum of 130 amps.
 - iii. All Type A-2 and Type B buses with a GVWR over 15,000 pounds, and all Type C and D buses shall be equipped with a heavy-duty truck or bus-type alternator meeting Standard J180, which is incorporated by reference in subsection (b)(i), having a minimum output rating of 130 amps, and shall produce a minimum current output of 50% of the rating at engine idle speed. The alternator may be either pad-mounted or hinge-mounted.
 - iv. Buses equipped with an electrically powered wheelchair lift or air conditioning may be equipped with a device that monitors the electrical system voltage and advances the engine idle speed when the voltage drops to, or below, a pre-set level.

- v. A belt-driven alternator shall be capable of handling the rated capacity of the alternator with no detrimental effect on any other driven components.
 - vi. A direct-drive alternator may be installed instead of a belt-driven alternator.
 - vii. If the school bus is equipped with an air conditioning system, the alternator shall have a minimum charging rate of 160 amperes per hour.
 - viii. The alternator on a school bus shall contain a regulator to control the voltage to the battery.
- c. Wiring:
- i. All wiring shall conform to the recommended practices of Standard J1292, October 1981 (no later amendments or editions), published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.
 - ii. All wiring shall use a standard color or number coding and each chassis shall contain a wiring diagram that details the wiring of the chassis.
 - iii. The chassis shall be equipped with a connection to provide electrical power to the school bus. The connection shall be located on the chassis cowl or on the engine compartment of a school bus designed without a chassis cowl. The connection shall contain terminals for the main 100 ampere body circuit, tail lamps, right-turn signal, left-turn signal, stop lamps, backup lamps, and instrument panel lights. The instrument panel lights shall have a rheostat control.
12. Engine horsepower: The gross vehicle weight rating of a school bus shall not exceed 185 pounds for each engine horsepower as published by the manufacturer on a notice located on the school bus engine.
13. Exhaust system:
- a. The exhaust pipe, muffler, and tailpipe shall be located under the school bus body and attached to the chassis.
 - b. The tailpipe shall be constructed of a corrosion-resistant tubing material at least equal in strength and durability to 16-gauge steel tubing.
 - c. The exhaust system on a gasoline-powered chassis shall be insulated from the fuel tank and fuel tank connections by a shield at any point where the exhaust system is 12 inches or less from the fuel tank or fuel tank connections.
14. Frame:
- a. A school bus frame shall be of a design and strength capable of supporting the gross vehicle weight of the school bus.
 - b. A school bus frame shall not be altered for any purpose.
 - c. Holes in top or bottom flanges of frame rails are not permitted except as provided by the manufacturer. There shall be no welding to the frame rails except by the chassis or body manufacturer or the manufacturer's certified agent.
 - d. The school bus frame shall not be cracked, loose, sagging, or broken.
 - e. Brackets securing the cab or the body of the school bus to the frame shall not be loose, broken, or missing.
 - f. The frame rail flanges shall not be bent, cut, or notched, except as specified by the manufacturer.
 - g. All accessories mounted to the school bus shall be secured as specified by the manufacturer.

- h. Holes shall not be drilled in the top or bottom rail flanges, except as specified by the manufacturer.
- 15. Front fenders of a Type C school bus: The outer edges of the front fenders shall be wider than the outer edges of the front tires when the front wheels are in the straight-ahead position.
- 16. Fuel system:
 - a. ~~A school bus shall contain a fuel tank with a minimum 30-gallon capacity, with a minimum dispersion of 25 gallons of fuel to the engine.~~ The fuel tank shall be vented to the outside of the school bus body so fuel spillage will not contact any part of the exhaust system.
 - b. On a Type B, Type C, or Type D school bus, no portion of the fuel system that is located outside of the engine compartment, except the filler tube, shall extend above the top of the chassis frame.
 - c. A fuel filter with replaceable element shall be installed between the fuel tank and engine.
 - d. The fuel line that supplies fuel to the engine shall be located at the top of the fuel tank.
- 17. Horn: A school bus shall be equipped with at least one horn capable of producing a sound level between 82 and 102 dB(A) when tested according to the Standard J377, March 2001 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.
- 18. Instruments and instrument panel:
 - a. The chassis shall be equipped with the following instruments:
 - i. Speedometer;
 - ii. Odometer that will give accrued mileage to seven digits, including tenths of miles;
 - iii. Voltmeter or ammeter;
 - iv. Oil pressure gauge;
 - v. Water temperature gauge;
 - vi. Fuel gauge;
 - vii. Upper beam head lamp indicator;
 - viii. Brake system signal as required by R13-13-106(4)(f);
 - ix. Turn signal indicator; and
 - x. Air pressure or hydraulic gauge.
 - b. The instruments shall be mounted on the instrument panel in the school bus driver's compartment and visible to the school bus driver while seated in the driver's seat.
 - c. The instrument panel shall be equipped with a rheostat switch that controls the illumination to the instrument panel and the gear shift selector indicator.
- 19. Oil filter: A replaceable element or cartridge-type oil filter shall be provided with a minimum capacity that meets or exceeds the capacity recommended by the manufacturer of the school bus engine.
- 20. Openings: All openings in the floorboard and in the fire wall between the chassis and passenger compartment shall be sealed.
- 21. Splash guards:

- a. A school bus shall be equipped with rear fender splash guards constructed of flexible rubberized material.
- b. The splash guards shall be wide enough to cover the tire tread width, installed close enough to the tire tread surface to control side-throw of road surface material, and extend to within 8 inches of ground level.

22. Steering system:

- a. Power steering is required on all school buses manufactured after January 1, 1984.
- b. Bracing extending from the center of the steering wheel to the steering wheel ring shall not be cracked or missing.
- c. The distance of movement of the steering wheel between two points of resistance shall not be greater than the following when measured with the engine running:

Steering wheel diameter	Power steering	Manual steering
16 in. or less	6 inches	3/4 4 1/2 in.
18 in.	7 inches	1/8 4 3/4 in.
20 in.	7 inches	7/8 5 1/4 in.
22 in.	8 inches	5/8 5 3/4 in.

- d. There shall be clearance of at least 2 inches between the steering wheel and any object in the driver's compartment.
- e. A non-adjustable steering column shall be fastened in a fixed position. An adjustable steering column shall be equipped with a locking mechanism.
- f. The steering gear housing shall not have loose or missing mounting bolts. There shall not be cracks in the gear housing or its mounting brackets.
- g. The connecting arm on the steering gear power source shall not be loose.
- h. The steering wheel shall turn freely in both directions.
- i. The steering system shall have a means for lubrication of all wear-points.

23. Suspension:

- a. Shock absorbers:
 - i. A school bus shall be equipped with front and rear double-acting shock absorbers. Replacements to shock absorbers shall be made according to the specifications of the manufacturer's part number as stamped on the shock absorber.
 - ii. If a school bus is manufactured with tandem rear axles, rear shock absorbers are not required.
- b. Suspension system:
 - i. Capacity of suspension assemblies shall be commensurate with the chassis manufacturer's gross vehicle weight rating.
 - ii. If leaf-type rear springs are used, they shall be a progressive rate or multi-stage design.

24. Tires and wheels:
 - a. Tires and wheels shall have an accumulated load rating at least equal to the gross vehicle weight rating.
 - b. Dual rear tires shall be provided on all school buses that have a gross vehicle weight rating of more than 10,000 pounds.
 - c. Each tire on a particular axle shall be the same size.
 - d. All tires on a school bus shall be bias or all tires on a school bus shall be radial and shall not differ more than one size between front and rear axles.
 - e. On a Type C or D school bus, a spare tire, if present, shall be in a carrier mounted outside the passenger compartment.
25. Transmission: The school bus transmission shall have no fewer than three forward speeds and one reverse speed.
26. Turning radius:
 - a. A chassis with a wheelbase of 264 inches or less shall have a right and left turning radius of not more than 42 1/2 feet, as measured to the edge of the front tire at the outside of a circle as the school bus moves within the circle.
 - b. A chassis with a wheelbase of more than 264 inches shall have a right and left turning radius of not more than 44 1/2 feet, as measured to the edge of the front tire at the outside of a circle as the school bus moves within the circle.
27. Weight:
 - a. The gross vehicle weight of a school bus shall not exceed the chassis manufacturer's gross vehicle weight rating for the chassis as recorded on a notice located in the school bus driver's compartment.
 - b. To calculate the gross vehicle weight of a school bus, add the chassis weight, the school bus body weight, the school bus driver's weight, and the total seated passenger weight.
 - i. For the purpose of calculation, the school bus driver's weight is 150 pounds.
 - ii. For the purpose of calculation, the passenger weight is 120 pounds per seated passenger.
 - c. The weight distribution of a school bus on a level surface that is fully loaded according to the gross vehicle weight rating shall not exceed the front axle gross weight rating or rear axle gross weight rating as recorded on a notice located in the school bus driver's compartment.

TITLE 13. PUBLIC SAFETY
CHAPTER 13. DEPARTMENT OF PUBLIC SAFETY
SCHOOL BUSES

ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

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ARTICLE 2. MINIMUM STANDARDS FOR SCHOOL BUSES OPERATED ON ALTERNATIVE FUEL

Section

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ARTICLE 1. SCHOOL BUS MINIMUM STANDARDS

R13-13-101. Definitions

In this Chapter, unless otherwise specified:

“Accident” means any unexpected occurrence involving a moving or non-moving school bus that results in any bodily injury or fatality to a passenger or non-passenger, damage to personal or real property outside the school bus, or damage to the school bus that affects the integrity of the school bus or results in a major defect as described in R13-13-108(B).

“Alternately flashing signal lamps” means a system of red or red and amber lamps that are mounted horizontally to both the front and rear of the school bus body and used to inform the public that the school bus is preparing to stop or has stopped to load or unload passengers. Alternately flashing signal lamps can be either a four-lamp system as described in R13-13-107(17)(c)(i) or an eight-lamp system as described in R13-13-9-107(c)(ii).

“Alteration” means any addition, modification, or removal of any equipment or

component after a school bus is inspected by the Department, which may affect the operations of the school bus; compliance with the statutes or rules applicable to school buses; or the health, safety, or welfare of any individual.

“Applicant” means an individual who submits an application to the Department to obtain a certificate to operate a school bus.

“ASE” means National Institute of Automotive Service Excellence.

“Auxiliary fan” means a device mounted inside the school bus body used to supplement the heating, defrosting, or air-conditioning systems by circulating air in the school bus.

“Behind-the-wheel instructor” means an individual qualified under R13-13-103 to provide behind-the-wheel training to applicants.

“Behind-the-wheel training” means the complete physical control of a school bus by an applicant while accompanied by and under direct observation of a behind-the-wheel instructor.

“Belt cutter” means a hand-held instrument containing a blade used to sever a seat belt or a wheelchair-securement device.

“Certificate” means a written authorization issued by the Department to operate a school bus in Arizona.

“Chassis” means the part of a school bus that consists of all base components, including the frame, front and rear suspension, exhaust system, brakes, engine, engine hood or cover, transmission, front and rear axles, front fenders, drive train and shaft, fuel system, engine air intake and filter, clutch and accelerator pedals, steering wheel, tires, heating and cooling system, battery, and controls and instruments to operate the school bus.

“Chassis cowl” means those parts of a Type C school bus that are located in front of the cowl and attached before a school bus manufacturer adds the school bus body.

“Citation” has the same meaning as at A.R.S. § 28-1872.

“Classroom instructor” means an individual qualified under R13-13-103 to provide classroom training to:

Applicants to operate a school bus,

Individuals becoming qualified to teach classroom training,

Individuals becoming qualified to teach techniques of behind-the-wheel training,

or

School bus drivers taking refresher training.

“Classroom training” means the courses required by the Department of an applicant before the applicant is certified or of an individual seeking qualification as a classroom or behind-the-wheel instructor.

“Commercial driver license” has the same meaning as at A.R.S. § 28-3001.

“Controlled substances and alcohol testing” means a determination of an applicant's

or school bus driver's use of marijuana, cocaine, phencyclidine, opiates, amphetamines, and alcohol prescribed by 49 CFR 382, October 2006 (no later amendments or editions), and conducted in accordance with the procedures at 49 CFR 40, October 2006 (no later amendments or editions), both published by the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference, and on file with the Department; and a determination of an applicant's or school bus driver's use of marijuana, cocaine, phencyclidine, opiates, amphetamines, barbiturates, benzodiazepines, methadone, and propoxyphene as required by these rules and conducted in accordance with a procedure that is generally accepted in the scientific community to be accurate and reliable.

“Cowl” means the portion of the chassis in a Type C school bus that separates the school bus engine from the school bus driver’s compartment.

“Cutaway van” means a chassis to which a completed driver's compartment is attached before a school bus manufacturer adds a school bus body.

“dB(A)” means decibels A scale, a term denoting that noise level has been adjusted to duplicate human hearing.

“Driver’s compartment” means the part of a school bus body that is separated from the passenger compartment by a barrier and contains the controls and instruments for the operation of the school bus.

“Emergency-brake system” means mechanical components used to slow or stop a school bus after a failure of the service-brake system.

“Emergency exit” means an opening in a school bus, including a door, push-out window, or roof hatch, used to unload passengers in the event of an occurrence that requires immediate evacuation of the school bus.

“Employer” means a private business or school district that hires applicants and certified school bus drivers to operate school buses.

“Frame” means the structural foundation upon which a school bus chassis is constructed.

“Frontage road” means a street that parallels an interstate highway and furnishes access to streets and property that would otherwise be unreachable from the interstate highway.

“Gross vehicle weight rating” means the value specified by the manufacturer as the maximum total loaded weight of a school bus, calculated in accordance with R13-13-106(27).

“Health care professional” means:

A physician licensed to practice medicine under A.R.S. § 32-1401 et seq., osteopathy under A.R.S. § 32-1800 et seq., or chiropractic under A.R.S. § 32-900 et seq.;

A physician licensed to practice medicine, osteopathy, or chiropractic in a state

contiguous to Arizona;

A physician employed by the United States government and licensed by a state or territory of the United States;

A physician assistant licensed under A.R.S. § 32-2501 et seq.; or

A registered nurse practitioner licensed under A.R.S. § 32-1601 et seq.

“Highway” has the same meaning as at A.R.S. § 28-101.

“Identification” means the signs, lettering, or numbers placed on the interior or exterior of a school bus body, including the glass areas, but does not include the lettering, numbers, or logos of a manufacturer or distributor of the manufacturer's product.

“Ignition power-deactivation switch” means a device that when set causes the engine of a motor vehicle to stop operating if the transmission is placed into gear or the parking-brake system is released.

“Interstate highway” means the designation given by the federal government to the system of highways connecting two or more states of the United States.

“Lamp” means a device that is covered by a lens and used to produce artificial light.

“Major defect” means a condition that exists to the interior or exterior of a school bus that causes the Department or owner to place the school bus out of service while the defect is being corrected.

“Manufacturer” means an entity engaged in the manufacturing or assembling of a school bus chassis, school bus body, or school bus chassis and body.

“Medical practitioner” has the same meaning as at A.R.S. § 32-1901.

“Minor defect” means a condition that exists to the interior or exterior of a school bus that is not a major defect and allows the school bus to remain in operation while the defect is being corrected.

“Off-duty” means the time a school bus driver is not on-duty.

“On-duty” means the period between the time a school bus driver begins to work for the employer or is required to be ready to work for the employer until the time the school bus driver is relieved from work and all responsibility for performing work for the employer. The time on-duty is used only to determine when a school bus driver must be provided time off-duty. Time on-duty may be compensated by the employer or an entity other than the employer or may be uncompensated. On-duty includes:

All time at an employer's place of business, waiting to be dispatched;

All time performing an operations check of a school bus in accordance with R13-13-108, or servicing or conditioning a school bus;

All time driving a school bus, including loading or unloading the school bus, and remaining in readiness to drive a school bus;

All time, at the direction of the employer, travelling but not driving a school bus or assuming any other responsibility to the employer. If the school bus driver is

afforded at least eight consecutive hours off-duty upon arrival at the school bus driver's destination after travelling but not driving a school bus or assuming any other responsibility to the employer, the school bus driver shall be considered off-duty for the entire period travelling but not driving the school bus or assuming any other responsibility to the employer;

All time repairing, obtaining assistance, or remaining in attendance upon a disabled school bus;

All time preparing required reports and records;

All time providing a breath or urine sample, including travel time to and from the collection site, to comply with the testing requirements of this Chapter;

All time performing any other work for the employer; and

All time performing any compensated work for any entity other than the employer.

“Out of service” means a school bus cannot be used to transport passengers.

“Owner” means the public or governmental agency or institution or private company in whose name a school bus is titled.

“Parking-brake system” means mechanical components used to prevent the movement of a school bus while loading or unloading a passenger or when the school bus is parked.

“Passenger” means an individual who rides in a school bus but does not participate in the operation of the school bus.

“Passenger compartment” means that part of the school bus body that is separated from the school bus driver's compartment by a barrier and holds the passengers to be transported.

“Physical examination” means an evaluation of an applicant's or school bus driver's medical status performed by a health care professional according to this Article.

“Physical examination form” means the Arizona Department of Transportation, Motor Vehicle Division, Medical Examination Report, which is used to record the results of a physical examination and may be obtained from the Department or Arizona Department of Transportation, Motor Vehicle Division.

“Physical performance test” means an evaluation of an applicant's or school bus driver's reflexes, agility, and strength performed according to this Article.

“Physical performance test form” means the document used to record the results of a physical performance test and may be obtained from the Department.

“Push-out window” means safety glass enclosed in a frame on a school bus that moves to the outside of the school bus when force is applied to the window from inside the school bus.

“Refresher training” means the courses required by the Department of each school bus driver to maintain certification as a school bus driver in Arizona.

“Restraining barrier” means a structure located in front of any school bus seat that

restricts the forward motion of a passenger.

“Rub rail” means a horizontal steel bar attached to the outside of a school bus body used to reinforce the sides of the school bus.

“Safety glass” has the same meaning as at A.R.S. § 28-959(F).

“School” means a school as defined by A.R.S. § 15-101(19), accommodation school as defined by A.R.S. § 15-101(1), charter school as defined by A.R.S. § 15-101(3), or private school as defined by A.R.S. § 15-101(18).

“School bus” has the same meaning as at A.R.S. § 28-101.

“School bus body” means a structure assembled upon a chassis designed to carry a school bus driver and passengers.

“School bus driver” means an individual who is certified by the Department as meeting the requirements at A.R.S. § 28- 3228 and R13-13-102 to operate a school bus in Arizona.

“School district” has the same meaning as at A.R.S. § 15-101 (20).

“Service-brake system” means mechanical components used to slow or stop a school bus.

“Service door” means a metal structure used to close the opening of a service entrance.

“Service entrance” means an opening in a school bus used to load or unload passengers.

“Special needs school bus” means a school bus that is designed to transport disabled passengers, some of whom may use a wheelchair, and is constructed with a service entrance and a special-service entrance.

“Special-service entrance” means an opening in a school bus that accommodates a wheelchair lift for the loading or unloading of a passenger who uses a wheelchair.

“Special-service entrance door” means a metal structure used to close the opening of a special-service entrance.

“Street” has the same meaning as at A.R.S. § 28-101.

“Traffic control signal” has the same meaning as at A.R.S. § 28-601.

“Training” means the instruction, courses, classes, or workshops provided by the Department or the employer that are required to obtain or maintain certification as a school bus driver or qualification as a classroom or behind-the-wheel instructor, or qualification to administer the physical performance test in Arizona.

“Transport” or “transporting” means a school bus driver sets a school bus in motion to carry passengers or objects authorized by the school district to be carried in a school bus.

“Type A school bus” means a conversion bus constructed utilizing a cutaway front section vehicle with a left side driver's door. This definition includes two

classifications: Type A-1, with a Gross Vehicle Weight Rating (GVWR) of 14,500 pounds or less; and Type A-2, with a GVWR greater than 14,500 pounds and less than or equal to 21,500 pounds.

“Type B school bus” means a school bus constructed utilizing a stripped chassis. The entrance door is behind the front wheels. This definition includes two classifications: Type B-1, with a GVWR of 10,000 pounds or less, and Type B-2, with a GVWR greater than 10,000 pounds.

“Type C school bus,” also known as a conventional style school bus, means a school bus constructed utilizing a chassis with a hood and front fender assembly. The entrance door is behind the front wheels. A Type C school bus may have a cutaway truck chassis or truck chassis with cab with or without a left side door and with a GVWR greater than 21,500 pounds.

“Type D school bus,” also known as a rear engine or front engine transit-style school bus, means a school bus constructed utilizing a stripped chassis. The entrance door is ahead of the front wheels.

“Van” means a covered or enclosed truck.

“Wheelchair” means a mobility aid consisting of a frame, seat, and three or four wheels, which is used to support and carry a disabled passenger.

“Wheelchair lift” means an electric hydraulic mechanism and platform in a school bus used to raise and lower a passenger in a wheelchair.

“Wheelchair-lift platform” means a horizontal surface upon which a wheelchair sits while being raised or lowered.

“Wheelchair-passenger restraint” means a combination of a pelvic and an upper torso restraint, including buckles and fasteners, designed to secure a passenger in a wheelchair within a school bus.

“Wheelchair-passenger restraint anchorage” means equipment for fastening wheelchair-passenger restraints to the interior of a school bus.

“Wheelchair-securement anchorage” means equipment for fastening a wheelchair-securement device to a school bus floor.

“Wheelchair-securement device” means a strap or webbing, including buckles and fasteners, used for fastening a wheelchair to a wheelchair-securement anchorage.

“Wheelchair-securement system” means components used to fasten a wheelchair to the interior of a school bus, including a wheelchair-securement anchorage and a wheelchair-securement device.

R13-13-102. Certification of School Bus Drivers

A. Certification requirements: An individual shall not operate a school bus in Arizona without being certified by the Department. An applicant for certification shall:

1. Be a minimum of 18 years of age;
2. Submit all of the following to the Department through the employer:
 - a. A completed fingerprint card and fingerprint card processing fee;
 - b. An application signed and dated by the applicant that states the applicant's:
 - i. Name, home address, and home phone number;
 - ii. Any alias ever used by the applicant;
 - iii. Social Security number;
 - iv. Date of birth;
 - v. Arizona commercial driver license number;
 - vi. Date of previous application for certification, if any;
 - vii. Intended employer's name;
 - viii. Convictions for a felony or misdemeanor, if any, in this state or any other state; and
 - ix. Total points accumulated against the applicant's driving record during the two years immediately preceding the date of application using the point system contained in A.A.C. R17-4-404;
 - c. Completed physical examination form, completed physical performance test form, and results of controlled substances testing; and
 - d. A verification made under penalty of perjury that all submitted information is true and complete;
3. Possess a current Arizona commercial driver license under A.R.S. § 28- 3101;
4. Possess any Arizona driver license endorsement required under A.R.S. § 28-3103;
5. Meet the driving record requirements listed in this Article; and
6. Complete the training requirements listed in this Article.

B. Physical examination

1. An applicant or school bus driver shall submit to a physical examination that is conducted by a health care professional in accordance with the physical examination form. An applicant or school bus driver is qualified to be certified as a school bus driver only if the health care professional conducts the physical examination in accordance with the physical examination form and concludes that the applicant or school bus driver has no condition that would interfere with the applicant's or school bus driver's ability to:
 - a. Operate a school bus safely,
 - b. Evacuate a school bus during an emergency or during a drill required under R13-13-104(D), and
 - c. Perform the operations checks required under R13-13-108(D).
2. An applicant or school bus driver who is insulin dependent shall obtain the waiver described in A.A.C. R17-5-208.
3. An applicant shall submit the completed physical examination form and, if applicable, a copy of the waiver required under subsection (B)(2), to the

- Department through the employer.
4. The initial physical examination of an applicant, conducted in accordance with the physical examination form, expires 24 months from the date of the physical examination unless a shorter time is specified by the health care professional who administers the physical examination. A school bus driver shall submit to a physical examination before the expiration date of the previous physical examination and send the completed physical examination form to the Department through the employer before the end of the month in which the previous physical examination expires.
 5. If a health care professional determines that further testing of an applicant or school bus driver is needed by an ophthalmologist or optometrist, the health care professional shall refer the applicant or school bus driver to:
 - a. An ophthalmologist licensed under A.R.S. § 32-1401 et seq.,
 - b. An optometrist licensed under A.R.S. § 32-1701 et seq.,
 - c. An ophthalmologist licensed to practice ophthalmology or optometrist licensed to practice optometry by a state contiguous to Arizona, or
 - d. An ophthalmologist licensed to practice ophthalmology or optometrist licensed to practice optometry by any state or territory of the United States and employed by the United States government.
 6. In addition to the physical examinations required by this Article, the Department or the employer may require a physical examination of an applicant or school bus driver for an impairment that would affect the ability to perform the activities listed in subsection (B)(1). The Department or employer shall base its decision to require an additional physical examination upon consideration of the appearance or actions of the applicant or school bus driver or of medical information received by the Department regarding the applicant or school bus driver. The applicant or school bus driver shall submit results of a physical examination conducted under this subsection to the Department through the employer within 30 days of the date of the physical examination.
- C. Controlled substances and alcohol testing
1. An applicant or school bus driver shall submit to alcohol and controlled substances testing as required by A.R.S. § 28-3228(C)(2) and as prescribed by this Article and 49 CFR 382 October 2006 (no later amendments or editions). The testing shall be conducted in accordance with the procedures at 49 CFR 40 October 2006 (no later amendments or editions), both published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference and on file with the Department, except for the changes in 49 CFR 40 and 49 CFR 382 listed in subsections (C)(1)(a) through (C)(1)(i).
 - a. 49 CFR 40.3
 - i. “Employee,” means an applicant or a school bus driver as defined at R13-13-101.
 - ii. “Employer” has the same meaning as at R13-13-101.
 - b. 49 CFR 382.107
 - i. “Commercial motor vehicle” has the same meaning as at A.R.S. §

- 28-3001(3).
- ii. "Driver" means a school bus driver as defined at R13-13-101.
 - iii. "Employer" has the same meaning as at R13-13-101.
 - iv. "Performing a safety-sensitive function" means any time during which a school bus driver is on-duty except when the school bus driver is being compensated by an entity other than the employer.
 - v. "Safety-sensitive function" means any activity for which a school bus driver is on-duty except when the school bus driver is performing an activity for and being compensated by an entity other than the employer.
- c. 49 CFR 382.207. In both sentences, the word "four" is changed to "eight."
 - d. 49 CFR 382.301(b), (c), and (d): Delete these subsections.
 - e. 49 CFR 382.303(a) and (b): Change the word "occurrence" to "accident," as defined in R13-13-101, and delete the words "operating on a public road in commerce."
 - f. 49 CFR 382.303(a)(1) and (b)(1): Delete the words ", if the accident involved the loss of human life"
 - g. 49 CFR 382.303(a)(2) and (b)(2): Delete the words ", if the accident involved:"
 - h. 49 CFR 382.303(a)(2)(i) and (ii) and (b)(2)(i) and (ii): Delete these subsections.
 - i. 49 CFR 382.303(c): In the table, in the column headed "Test must be performed by employer," change "No" to "Yes."
- 2. In addition to the testing required by 49 CFR 382, an applicant shall submit to testing for the use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene by a procedure that is generally accepted in the scientific community to be accurate and reliable.
 - 3. In addition to the testing required by 49 CFR 382, a school bus driver shall submit annually to testing for the use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene by a procedure that is generally accepted in the scientific community to be accurate and reliable.
 - 4. The employer shall ensure that a school bus driver is tested for use of marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, or propoxyphene or alcohol when required to do so by these rules or when requested by the Department.
 - 5. The employer shall submit any and all negative results of testing done under subsection (C) to the Department within 30 days of the date of testing or within 12 months of the school bus driver's previous test, whichever is sooner, by providing the Department a copy of the report submitted to the employer by the entity that conducted the testing.
 - 6. The employer shall immediately notify the Department by telephone of any and all positive results of testing done under subsection (C) and shall submit to the Department within five days a copy of the report submitted to the employer by the entity that conducted the testing.
- D. Physical performance test

1. An applicant shall pass a physical performance test that consists of the following eight standards:
 - a. Climbing and descending the steps of a school bus three times in 30 seconds;
 - b. Alternately activating the throttle and the service-brake system of a school bus 10 times in 10 seconds;
 - c. Depressing and holding the clutch, if applicable, and service-brake system of a school bus for three seconds, five consecutive times;
 - d. Opening and closing a manually operated service door three times without stopping. If the school bus has an automatic service door, operate the manual override of the service door;
 - e. Operating at least two hand controls, one on each side of the steering wheel, within eight seconds while maintaining control of a moving school bus;
 - f. Starting in a seat-belted position, exit a school bus from the rear-most floor-level emergency exit within 20 seconds;
 - g. Carrying or dragging a 125-pound object 30 feet in 30 seconds; and
 - h. Lowering a 30-pound object from a floor-level emergency exit to the ground and lifting the same object from the ground to the school bus floor.
2. A school bus driver who is certified on the effective date of this subsection shall pass the physical performance test within one year from the effective date of this subsection.
3. A school bus driver shall pass the physical performance test again no later than 24 months after previously passing the physical performance test.
4. An applicant or school bus driver who fails the physical performance test may take the test again after 24 hours. An applicant or school bus driver may take the physical performance test no more than three times in 90 days. If an applicant fails the physical performance test on the third attempt, the Department shall not further consider the applicant for certification unless the applicant complies again with the requirements of this Section.
5. The employer shall ensure that a school bus driver who fails the physical performance test does not operate a school bus until the school bus driver passes the physical performance test.
6. If a school bus driver takes and fails the physical performance test three times, the Department shall cancel the school bus driver's certification.
7. An employer shall ensure that the physical performance test is administered by a person who has completed Department-authorized training, using the largest type of school bus that an applicant or school bus driver may be required to operate.
8. A person who administers the physical performance test shall either pass or fail the applicant or school bus driver taking the test, complete the physical performance test form, and submit the completed form to the Department and the employer within seven days of the physical performance test.

E. Driving record

1. During the 24 months before the date of application or during any 24-month period while certified as a school bus driver, an applicant or school bus driver shall not accumulate eight or more points against a driving record in this state using the point system contained in A.A.C. R17-4-404.

2. During the 10 years before the date of application, an applicant shall not have repeatedly received citations for violation of traffic law.

F. Training requirements of a school bus driver

1. Before being certified by the Department as a school bus driver, an applicant shall complete a minimum of 14 hours of classroom training in the following:
 - a. State and federal traffic laws,
 - b. Behind-the-wheel driving operations,
 - c. School bus driver's responsibilities to passengers and school,
 - d. Inspections and operations checks,
 - e. Records and reports,
 - f. Special needs transportation, and
 - g. Accidents and emergencies.
2. An employer shall ensure that classroom training is taught by a classroom instructor who is qualified under R13-13-103.
3. At least seven days before classroom training, the classroom instructor shall notify the Department in writing of the date, time, and location of classroom training. The classroom instructor shall notify the Department by any means available at least 24 hours before the date, time, or location of classroom training is changed or canceled.
4. After completion of classroom training, the classroom instructor shall administer to the applicant a written examination standardized by the Department.
 - a. The written examination shall consist of a combination of 50 true or false, multiple choice, and fill-in-the-blank questions. The examination questions shall cover the topics listed in subsection (F)(1).
 - b. Each question has a value of two points. To pass the examination an applicant shall receive a score that equals or exceeds 80% of the total possible score.
 - c. If an applicant is unable to read or speak English, the employer shall arrange to have the examination administered orally to the applicant in the language with which the applicant is most familiar.
 - d. If an applicant does not pass the examination on the first attempt, the applicant may take an examination two more times within 12 months of the first attempt. A different examination shall be administered to an applicant who is taking an examination for the second or third time. The period between examinations shall be a minimum of 24 hours. If the applicant fails the examination on the third attempt, the applicant shall be considered further only if the applicant complies again with the requirements in this Section.
5. The classroom instructor shall submit the following information in a written report to the Department and the employer within seven days from the date of the conclusion of a classroom training course:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of training,
 - d. Location of training,
 - e. Number of hours of training taught by the classroom instructor,
 - f. Each applicant's name, and

- by a nationally recognized organization such as the American Heart Association, American Red Cross, National Safety Council, American Safety and Health Institute, or Arizona Bureau of Mines; by an emergency medical technician licensed in Arizona; or by an agency of the U.S. government.
3. An applicant shall submit to the Department, through the employer, a copy of the front and back of the first-aid card and cardiopulmonary resuscitation card issued to the applicant or other written documentation as proof of completion of the first-aid and cardiopulmonary resuscitation training.
 4. A school bus driver shall renew first-aid and cardiopulmonary resuscitation training before expiration of the current training. Renewal instruction shall be provided by an individual described in subsection (G)(2). The school bus driver shall submit to the Department, through the employer, a copy of the front and back of the first-aid card and cardiopulmonary resuscitation card or other written documentation as proof of renewal of training.
- H.** The Department shall process an application for certification as a school bus driver under R13-13-109.
- I.** Refresher training
1. A school bus driver shall have refresher training no later than 24 months following completion of the training required by subsection (F). Refresher training shall consist of a minimum of 6 1/2 hours of classroom training in the topics listed in subsection (F)(1).
 2. After completing the first refresher training, the school bus driver shall complete a minimum of 6 1/2 hours of classroom training in the topics listed in subsection (F)(1) every 24 months following the last refresher training.
 3. An employer shall ensure that refresher training is taught by a classroom instructor who is qualified under R13-13-103.
 4. A classroom instructor shall teach refresher training and shall submit the following information in a written report to the Department and the employer within seven days from completion of the refresher training:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of training,
 - d. Location of training,
 - e. Number of hours of training taught by the classroom instructor,
 - f. Each school bus driver's name, and
 - g. Each school bus driver's certification number.
 5. In addition to the report required under subsection (I)(4), the classroom instructor shall maintain and submit to the employer within seven days from the conclusion of a refresher training course, a refresher-training course log that includes:
 - a. Instructor's name,
 - b. Instructor's identification number,
 - c. Date of the refresher training course,
 - d. Name and certification number of each school bus driver attending the refresher training course,
 - e. Subject matter taught in each hour, and

f. Which hours of refresher training were attended by each school bus driver.

J. Records

1. The employer shall maintain qualification and training records of an applicant who is certified and of a school bus driver who terminates employment, and qualification records of an applicant who is denied certification, for 24 months from the date of certification, termination of employment, or denial of certification.
2. The employer shall maintain records of testing required under subsection (C) in accordance with 49 CFR 382.401, October 2006 (no later amendments or editions), published at the U. S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference, and on file with the Department. In this subsection, "controlled substances," as used in 49 CFR 382.401, means marijuana, cocaine, opiates, amphetamines, phencyclidine, benzodiazepines, barbiturates, methadone, and propoxyphene.
3. The employer shall transfer the records of a school bus driver to a subsequent employer upon written request by the subsequent employer or school bus driver.
4. Qualification records include:
 - a. Application,
 - b. Driving record,
 - c. Copy of physical examination form, and
 - d. Physical performance test form.
5. Training records include:
 - a. A copy of the classroom-training course log required under subsection (F)(6) that shows the applicant's attendance,
 - b. A copy of the refresher-training course log required under subsection (I)(5) that shows the school bus driver's attendance,
 - c. The classroom training examination score,
 - d. The applicant's behind-the-wheel training log,
 - e. The Proof of Completion of Behind-the-wheel Training and Driving Test form,
 - f. A copy of the first-aid card and cardiopulmonary resuscitation card or other written documentation of completion of first-aid and cardiopulmonary resuscitation training, and
 - g. A copy of the school bus driver certification card issued by the Department.

K. Denial, cancellation, or suspension of certificate

1. Based on an assessment of the totality of the circumstances, the Department may deny a certificate to an applicant or may cancel or suspend a certificate of a school bus driver for:
 - a. Failing to meet or comply with the requirements of this Article;
 - b. Being convicted of or subject to an outstanding warrant for any felony;
 - c. Being convicted of or subject to an outstanding warrant for any misdemeanor reasonably related to the occupation of a school bus driver including, but not limited to:
 - i. Citation for any moving motor vehicle violation, including but not limited

- to, violations of A.R.S. § 28-1591 et seq.;
 - ii. Driving under the influence (A.R.S. § 28-1381 et seq.);
 - iii. Any sexual offense (A.R.S. § 13-1401 et seq.);
 - iv. Any abuse of a child (A.R.S. § 13-3623); or
 - v. Use, sale, or possession of a controlled substance (A.R.S. § 13-3401 et seq.).
 - d. Demonstrating behavior that endangers the educational welfare or personal safety of students, teachers, or school bus drivers or other co-workers;
 - e. Providing false, incomplete, or misleading information to the Department;
 - f. Driving or being in actual physical control of a school bus under a circumstance listed in A.R.S. § 28-1381(A);
 - g. Under A.R.S. §§ 28-3301 through 28-3322, having a commercial driver license canceled, suspended, revoked, or denied; or
 - h. Having a verified positive result to any controlled substance or alcohol test required by subsections (C)(1), (2), or (3), at any time.
 - 2. Any conviction, violation, warrant, or other misconduct described in this Section shall be considered, whether or not the school bus driver was operating a school bus at the time of the conviction, violation, warrant, or other misconduct.
 - 3. An applicant who is denied a certificate or a school bus driver whose certificate is canceled or suspended may request a hearing within 30 days from the date of receipt of the notice of the denial, cancellation, or suspension. The hearing shall be conducted according to the procedures contained in A.R.S. Title 41, Chapter 6, Article 10.
 - 4. The Department shall inform an applicant who is denied a certificate or a school bus driver whose certificate is canceled or suspended of the amount of time that must elapse before the applicant or the school bus driver may reapply for certification. The Department shall include this information in the notice of denial, cancellation, or suspension and the notice of final order, if any, served on the applicant or school bus driver. In determining the amount of time that must elapse before reapplication, the Department shall consider:
 - a. The seriousness of the offense leading to denial, cancellation, or suspension;
 - b. The frequency with which the offense occurred; and
 - c. The amount of time required to correct the offense.
- L. If a school bus driver is terminated from or leaves employment, the employer shall provide written notice to the Department within 30 days of the termination or leaving. If a school bus driver transfers employment from one employer to a second employer, within 14 days of the transfer the second employer shall provide written notice to the Department of the:
 - 1. School bus driver's name,
 - 2. School bus driver's certification number,
 - 3. Name of the transferring employer, and
 - 4. Effective date of the transfer.

R13-13-103. Qualification of Classroom and Behind-the-wheel Instructors

A. To be qualified as a classroom instructor, an individual shall:

1. Submit to the Department through the employer, the following two letters:
 - a. A letter from, signed, and dated by the individual that states the individual's:
 - i. Name, home address, and home phone number;
 - ii. Social Security number;
 - iii. Date of birth;
 - iv. Current employer's name, address, and phone number;
 - v. Dates of all previous letters submitted under this subsection; and
 - b. A letter from the current employer recommending that the individual be considered as a classroom instructor; and
2. Pass a written examination standardized by the Department:
 - a. The written examination shall consist of a combination of 50 true or false, multiple choice, and fill-in-the-blank questions. The examination questions shall cover the topics listed in R13-13-102(F)(1).
 - b. Each question has a value of two points. To pass the examination, an individual shall receive a score that equals or exceeds 90% of the total possible score.
 - c. If an individual taking the written examination is unable to read or speak English, the employer shall arrange to have the examination administered orally in the language with which the individual is most familiar.
 - d. If an individual does not pass the examination, the individual may take a second examination that is different from the first examination.
 - e. If an individual fails to pass the second examination, the individual may receive further consideration by submitting again the letters required by subsection (A)(1) and taking the written examination required by this subsection.
 - f. The employer shall submit each individual's examination score to the Department within seven days from the date of the examination.

B. To remain qualified as a classroom instructor, a classroom instructor shall teach a minimum of 12 hours of classroom or refresher training every 24 months from the date the classroom instructor is first recognized by the Department as qualified.

C. To be qualified as a behind-the-wheel instructor, an individual shall:

1. Be certified continuously as a school bus driver in Arizona for the 12 months immediately before submitting the letters described in subsection (C)(2) and be employed as a certified school bus driver at the time of qualification as a behind-the-wheel instructor;
2. Submit to the Department through the employer, the following two letters:
 - a. A letter from, signed, and dated by the individual that states the individual's:
 - i. Name, home address, and home phone number;
 - ii. Social Security number;
 - iii. Commercial driver license number;
 - iv. Current employer's name, address, and phone number;

- e. Use, sale, or possession of a controlled substance (A.R.S. § 13-3401 et seq.);
 - 4. Provides false, incomplete, or misleading information to the Department;
 - 5. Drives or is in actual physical control of a school bus under a circumstance listed in A.R.S. § 28-1381(A); or
 - 6. Under A.R.S. §§ 28-3301 through 28-3322, has a commercial driver's license canceled, suspended, revoked, or denied.
- G.** If a classroom or behind-the-wheel instructor is terminated from or leaves employment, the employer shall provide written notice to the Department within 30 days of the termination or leaving. If a classroom or behind-the-wheel instructor transfers employment from one employer to a second employer, within seven days of the transfer the second employer shall provide written notice to the Department of the:
- 1. Name of the classroom or behind-the-wheel instructor,
 - 2. Identification number of the classroom or behind-the-wheel instructor,
 - 3. Name of the transferring employer, and
 - 4. Effective date of the transfer.

R13-13-104. Minimum Standards for School Bus Operation

A. A school bus driver shall perform operations checks of a school bus as required by R13-13-108.

B. Loading or unloading of passengers:

1. As of February 16, 1996, an eight-lamp system as described in R13-13-107(17) shall be installed on a school bus before it is introduced into Arizona. When preparing to stop a school bus on a street or highway, the school bus driver shall activate the alternately flashing amber lamps of an eight-lamp system or the alternately flashing red lamps of a four-lamp system for a minimum distance of 100 feet, in accordance with A.R.S. § 28-930(B). Whenever the school bus is stopped on a street or highway to load or unload passengers, the school bus driver shall deactivate the alternately flashing amber lamps and activate the alternately flashing red lamps of an eight-lamp system, and extend the stop arm and open the service door.
2. When a school bus driver stops the school bus to load or unload passengers, the school bus driver shall set the parking brake and place the transmission in neutral.
3. The distance between stops for the purpose of loading or unloading passengers shall be no less than 600 feet, unless the school determines that more frequent stops are necessary for safety. The school bus driver shall stop the school bus as near the right edge of the traveled portion of the street or highway as possible.
4. A school bus driver shall not load or unload passengers on the traffic side of the bus.
5. When a school bus driver loads or unloads passengers who must cross a street or highway at a location other than an intersection, the passengers shall cross at least 10 feet in front of the front bumper of the school bus. The school bus driver shall not permit passengers who must cross a street or highway to be unloaded from the school bus until all traffic to the front and rear of the school bus is stopped. The school bus driver shall not move the school bus until all passengers have crossed the street or highway.
6. In intersections that use lighted traffic control signals, a school bus driver shall load or unload passengers no closer than 100 feet of the traffic control signal so the passengers may cross with the traffic control signal, either before or after the school bus proceeds.
7. In intersections without lighted traffic control signals, a school bus driver shall load or unload passengers no closer than 50 feet of the intersection so the passengers may cross at the intersection, either before or after the school bus proceeds.
8. A school bus driver shall not stop a school bus on an interstate highway for the purpose of loading or unloading passengers, except that:
 - a. A school bus stop may be established on a frontage road that parallels an interstate highway if no passenger is allowed to cross a divided highway.
 - b. A school bus may stop in a safety rest area as defined by A.R.S. § 28-7901(8) that is part of or adjacent to an interstate highway.
9. A school bus driver shall load or unload passengers on school grounds only in an

- area designated by the school and marked with a sign as a school bus loading area.
10. During loading or unloading of passengers at a designated school bus loading area at a school, the school shall restrict the loading area to school buses, passengers, and school employees assisting in the loading or unloading of passengers.
 11. A school shall allow passengers in a designated school bus loading area only when the passengers are being loaded on or unloaded from a school bus.
 12. A school shall designate all school bus loading areas at locations that prevent backing of the school bus.
 13. In areas at a school not designated as a school bus loading area, a school bus driver shall not back upon or adjacent to the school grounds unless an individual authorized by the school bus driver directs the backing procedure while standing at the rear of the school bus in a position visible to the school bus driver. This provision does not apply to a school bus garage or school bus storage area where passengers are not allowed.
 14. Immediately before a school bus driver engages in backing a school bus, the school bus driver shall sound the horn to warn motorists and pedestrians of the backing procedure. This provision does not apply if the school bus is equipped with an alarm that operates automatically when the school bus is backing.
 15. In addition to the requirements for railroad grade crossings contained in A.R.S. § 28-853, a school bus driver shall comply with the following:
 - a. Use hazard warning lights as described in A.R.S. § 28-947(D) within a minimum of 100 feet of a railroad grade crossing to warn motorists of an intended stop.
 - b. Shut off any radio, compact-disc player, and other source of sound within 50 feet of a railroad grade crossing.
 - c. Stop the school bus, with or without passengers aboard, at a railroad grade crossing when traffic at the railroad grade crossing is not directed by a police officer.
 - d. While stopped at a railroad grade crossing at which traffic is not directed by a police officer, activate the noise suppression switch, completely open the service door and the window to the left of the driver and, by hearing and sight, determine that it is safe to cross. Before proceeding, close the service door. De-activate the noise suppression switch after crossing the tracks.
 - e. Do not stop to load or unload passengers within 200 feet of a railroad grade crossing. This provision does not prohibit stops at a railroad station or on a highway that parallels the railroad tracks.
 16. When a school bus driver loads a wheelchair passenger on a school bus, the school bus driver shall secure both the wheelchair and the wheelchair passenger using the systems described in R13-13-105(E).
- C. An employer shall not allow or require a school bus driver to drive a school bus nor shall a school bus driver drive a school bus:
1. For more than 10 hours after having been off-duty for a minimum of eight consecutive hours;
 2. For any period after having been on-duty for 15 hours after having been off-duty

- for a minimum of eight consecutive hours;
3. After having been on-duty 60 hours in any seven consecutive days if the employer does not operate school buses for seven consecutive days; or
 4. After having been on-duty 70 hours in any eight consecutive days if the employer operates school buses every day of the week.

D. Other requirements:

1. A school bus driver shall wear a seat belt whenever the school bus is in motion.
2. While operating a school bus, a school bus driver shall wear closed-toe, closed-heel shoes that will not interfere with driving the school bus safely or performing other duties of the school bus driver.
3. A school bus driver shall comply with all state traffic laws while operating a school bus except that the school bus driver shall not exceed 65 miles per hour or the posted speed limit, whichever is less, when operating the school bus on an interstate highway.
4. Any person boarding or attempting to board a school bus, whether or not a passenger, shall comply with all instructions given by a school bus driver. If a passenger or a non-passenger boards or attempts to board a school bus and refuses to comply with the school bus driver's instructions, the school bus driver may seek emergency assistance to remove the passenger or non-passenger from the school bus, or prevent the passenger or non-passenger from boarding.
5. All passengers shall sit with their backs against the seat backs, their legs facing towards the front of the school bus, and all parts of their bodies clear of all aisles whenever the school bus is in motion.
6. A school bus driver shall not transport in a school bus more passengers than the rated capacity stated by the school bus manufacturer.
7. A school bus driver shall close the service doors of a school bus before operating the school bus. The service doors shall remain closed whenever the school bus is in motion.
8. A school bus driver shall not place the transmission in neutral or coast with the clutch disengaged on a downhill grade.
9. The driver of a school bus equipped with a two-speed axle shall not shift the axle while descending any hill posted with grade warning signs.
10. A school bus driver shall ensure that a school bus is not fueled in a closed building, while the school bus engine is running or while passengers are on board.
11. A school bus driver or passenger shall not use tobacco in any form on a school bus.
12. A school bus driver shall not carry on a school bus or consume any beverage containing any alcohol while on-duty with the employer or within eight hours before going on-duty with the employer.
13. A school bus driver shall not eat or drink on a school bus unless the school bus is completely stopped.
14. A school bus driver shall not at any time carry on a school bus or use a controlled substance.
15. A passenger shall not carry on a school bus or consume while being transported in a school bus, any beverage containing any alcohol.

16. A passenger shall not carry on a school bus or consume while being transported in a school bus, any dangerous or narcotic drug, as defined in A.R.S. § 13-3401, unless:
 - a. A medical practitioner authorized by the state to write a prescription for the dangerous or narcotic drug has prescribed the dangerous or narcotic drug for the passenger who is carrying or consuming it;
 - b. The school district governing board establishes written policies and procedures regarding the administration of a dangerous or narcotic drug by a trained district employee to a passenger who is being transported in a school bus; and
 - c. The parent or legal guardian of a passenger to whom a dangerous or narcotic drug is administered while being transported in a school bus provides prior written authorization for the dangerous or narcotic drug to be administered to the passenger by a trained district employee.
17. A school bus driver shall not assume responsibility for transporting any medication, whether prescription or over-the-counter, that belongs to a passenger.
18. A school bus driver shall not transport animals, insects, or reptiles in a school bus with the exception of service animals, as defined at A.R.S. § 11-1024(J), which assist disabled passengers.
19. Except for eyeglasses, a passenger or school bus driver shall not carry or transport glass objects on a school bus.
20. A school bus driver or passenger shall not carry on or transport in a school bus an explosive device, gun, knife, or other weapon as defined by school-district policy.
21. A passenger shall not place any part of the passenger's body out of a school bus window or door except when exiting the school bus.
22. When instruments or equipment related to musical or athletic events are transported on a school bus, the school bus driver shall transport them as follows:
 - a. Instruments or equipment shall not occupy seating space if needed for a passenger,
 - b. Instruments or equipment shall not be placed in the school bus driver's compartment or step-well of the school bus,
 - c. Instruments or equipment shall be under the passenger's control at all times or secured in the school bus, and
 - d. Instruments or equipment shall not block an aisle or emergency exit of the school bus at any time.
23. A passenger who carries onto a school bus an object other than an instrument or equipment related to musical or athletic events shall control the object at all times or secure the object in the school bus. If the passenger is not able to control or secure the object in the school bus, the passenger shall not carry the object onto the school bus.
24. A school bus driver shall ensure that all objects inside the school bus are under a passenger's control or secured in a manner that prevents the objects from causing physical injury to others or affecting the safe operation of the school bus.
25. A school bus driver shall not drive a school bus with a trailer or other vehicle attached to the school bus.

26. A school bus driver shall stop the school bus and check the wheels and tires for wear, damage, and inflation after every two continuous hours of driving.
27. All school buses shall have and school bus drivers shall use a two-way voice communication system. The two-way voice communication system shall only be used to assist the school bus driver with passenger transportation.
28. Except as provided in subsection (D)(27), a school bus driver shall not use audio headsets, earphones, earplugs, Bluetooth devices, cellular phones, personal digital assistants, or other interactive wireless devices, whether or not hands-free, when the school bus is in operation.
29. Except when complying with R13-13-108(D), if a school bus driver leaves the driver's compartment, the school bus driver shall set the parking-brake system, place a standard transmission in either first or reverse gear, place an automatic transmission in park or neutral, and turn off the ignition and remove the ignition key from an ignition that uses a key, or set the ignition power-deactivation switch of an ignition that does not use a key.
30. Each time a school bus driver unloads passengers and it appears that no passengers remain on the school bus, the school bus driver shall inspect the interior of the school bus for passengers remaining and objects left on the school bus. If the school bus is equipped with a child alert notification system as described in R13-13-106(6), the school bus driver shall complete all procedures required by the child alert notification system, in addition to the school bus driver's inspection of the interior of the school bus.
31. At least twice during every school year, a school shall conduct an evacuation drill of a school bus at the school that includes every passenger who rides a school bus and is in school on the day of the evacuation drill. At least 14 days before an evacuation drill, a school shall submit to the Department a written notice stating the date, time, and location of the evacuation drill. Each school bus driver shall participate in a minimum of two evacuation drills during every school year. Evacuation drills shall include:
 - a. Practice and instruction in the location, use, and operation of the emergency exits, fire extinguishers, first aid equipment, windows as a means of escape, and communication systems;
 - b. Practice and instruction in when and how to approach, load, unload, and move away from the school bus a minimum of 100 feet;
 - c. Instructions on how weather-related hazards affect emergency procedures; and
 - d. Instructions on the importance of orderly conduct.
32. A white, flashing, strobe lamp as described in R13-13-107(17)(f) may be used only during conditions that produce low visibility or that are hazardous.
33. An owner shall ensure that no lock, except as provided in R13-13-107(10)(h), is installed on any school bus emergency exit or service door.
34. A school bus driver shall ensure that nothing obstructs or interferes with the use of any school bus emergency exit or service door.
35. A school bus driver, passenger, or school administrator shall immediately report to the employer any violation of these rules or state statutes that the school bus

driver, passenger, or school administrator reasonably believes threatens the health, safety, or welfare of a passenger.

E. Reports and recordkeeping:

1. Immediately following any accident involving a school bus, the school bus driver shall report the accident to the employer.
2. Immediately upon receiving notification of any accident involving a school bus, the employer shall notify the Department of the accident by telephone. The employer shall submit written verification of the accident to the Department within 72 hours of the telephone notification.
3. Immediately upon becoming aware of a violation of these rules or state statutes that a reasonable person could conclude caused injury to or threatened the health, safety, or welfare of a passenger, the employer shall notify the Department of the violation by telephone. The employer shall submit a written report of the violation to the Department within 72 hours of the telephone notification.
4. No later than 14 days after an evacuation drill, a school district shall submit to the Department a written report of the evacuation drill identifying the school district, participating school, date, and number of participants.
5. From the date on which a record is created, the employer shall maintain for three years the following written records for each school bus driver:
 - a. On a daily basis, the period of time each school bus driver is on-duty for the employer including the date, each start and quit time, and the total number of hours on-duty for the employer.
 - b. On a daily basis, the total number of hours on-duty for an entity other than the employer during the previous seven days.
6. A school bus driver who performs any compensated work for an entity other than the employer shall provide the employer, in writing, the name and telephone number of the entity and the number of hours the school bus driver works each day for the entity.
7. A school bus driver who receives a citation, whether on-duty or off-duty, shall immediately inform the employer by telephone about the citation and shall submit a copy of the citation to the employer within five days.

R13-13-105. Special Needs Standards

A. General requirements:

1. A school bus introduced to Arizona on or after May 31, 2008 used for transporting disabled passengers shall comply with the minimum standards applicable to school buses and the specifications contained in this Section. A school bus introduced to Arizona before May 31, 2008 used for transporting disabled passengers shall comply with the minimum standards in this Section or shall be maintained in accordance with the manufacturer's original specifications.
2. Any school bus that is used for transporting a passenger who uses a wheelchair shall be equipped with a wheelchair lift.
3. A wheelchair lift shall be located on the side of the bus body opposite the school bus driver. The wheelchair lift shall not be attached to the exterior sides of the school bus and shall be confined within the school bus body when not extended.
4. Any school bus that is used for transporting disabled passengers shall be equipped with a belt cutter that is accessible only to the school bus driver. The belt cutter shall be secured in a location within reach of the school bus driver while belted into the driver's seat. The school bus may be equipped with additional belt cutters. Additional belt cutters shall be accessible only to the school bus driver or adult aides or attendants.

B. Special-service entrance:

1. A school bus used for transporting disabled passengers shall have a special-service entrance of a width and depth to accommodate a wheelchair lift. The special-service entrance shall have a minimum clear opening of 30 inches horizontally to allow for the passage of a wheelchair.
2. The special-service entrance shall be located on the side of the bus opposite the school bus driver and far enough to the rear of the school bus to prevent the special-service entrance door from obstructing the service door when the special-service entrance door is open.
3. A drip molding shall be installed above the special-service entrance to divert water from the special-service entrance.
4. The frame surrounding the special-service entrance shall provide support and strength at least equal to at the conventional service and emergency doors.

C. Special-service entrance doors:

1. A school bus used for transporting passengers in wheelchairs shall provide a special-service entrance door not to exceed 50 inches in width.
2. Two doors may be used for a special-service entrance on a school bus, if the doors are equipped with a positive latching mechanism to prevent accidental opening.
3. The special-service entrance door shall be constructed to open toward the exterior of the school bus. A Type A school bus is exempt from this provision if its special-service entrance door is provided by the school bus chassis manufacturer.
4. The special-service entrance door shall have a fastening device attached to the school bus body to hold the special-service entrance door in an open position.
5. The special-service entrance door shall be weather-sealed by a waterproof

- cushion affixed to the door or door frame.
6. Door materials, panels, and structural strength of a special-service entrance door shall be equivalent to the standards contained in R13-13-107 for a service door and an emergency door. Color, rub rail extensions, if installed, lettering, and all exterior features shall match adjacent sections of the school bus body.
 7. The window in the special-service entrance door shall be made of safety glass, mounted in a waterproof manner that is equal to the mounting of the other windows, and aligned with the side windows of the school bus.
 8. A pressure switch shall be installed in the special-service entrance door frame that will actuate a visible signal located in the school bus driver's compartment when the ignition is in the "on" position to warn the school bus driver when the special-service entrance door is not closed.
 9. A switch shall be installed in the special-service entrance door frame so the wheelchair lift will not operate when the special-service entrance door is closed.

D. Wheelchair lift:

1. A wheelchair lift shall be capable of lifting a minimum load of 800 pounds.
2. When the wheelchair-lift platform is raised to the maximum position, it shall be held in position by the wheelchair lift.
3. Controls shall be provided that enable an individual authorized by the school bus driver to activate the wheelchair lift from either inside or outside the school bus.
4. The wheelchair lift shall be equipped so it may be manually raised or lowered in the event of a power failure to the wheelchair lift.
5. The wheelchair lift shall contain a safety device to prevent the wheelchair-lift platform from falling.
6. The wheelchair lift shall be constructed so it allows the wheelchair-lift platform to rest completely on the ground.
7. All edges of the wheelchair-lift platform shall be designed to restrain the wheelchair and prevent the feet of an individual in the wheelchair from becoming caught during the raising or lowering process.
8. A barrier shall be attached along the outer non-loading edges of the wheelchair-lift platform that will prevent the wheelchair from rolling off the wheelchair-lift platform when the wheelchair-lift platform is placed in any position other than completely extended on ground level.
9. A self-adjusting, skid-resistant plate shall be installed on the loading edge of the wheelchair-lift platform to reduce the incline from the wheelchair-lift platform to ground level. This plate shall be used as a restraining barrier on the loading edge of the wheelchair-lift platform. The wheelchair-lift platform shall be skid-resistant.
10. A school bus may be provided with a battery to be used exclusively to operate the wheelchair lift. If a battery is installed for this purpose, an appropriate size circuit breaker meeting the wheelchair lift manufacturer's specifications shall be installed between the battery and the wheelchair lift motor. The circuit breaker shall be located as close to the power source as possible, but not within the school bus driver's compartment.
11. The wheelchair lift shall be equipped with an adjustable switch that limits the

- electrical power to the wheelchair-lift motor and a bypass valve to prevent pressure from building in the hydraulic system when the wheelchair-lift platform reaches the maximum up or down position.
12. A ramp may be carried on a school bus for use during an occurrence that requires evacuating the school bus. The ramp shall not be stored within the passenger compartment of the school bus.
- E. Wheelchair and wheelchair-passenger securement:**
1. Each wheelchair in a school bus shall be secured in a forward-facing position. Medical equipment and supplies required to accommodate a disabled passenger shall be secured in a school bus by means of alterations approved by the Department in accordance with R13-13-108(G).
 2. Each wheelchair-securement system location in a school bus shall have a minimum clear floor area of 30 inches in width from the interior school bus wall to the aisle and a minimum of 48 inches in length. A wheelchair shall not be placed in a position that prevents passage through the special-service entrance.
 3. Each wheelchair-securement system shall have four full-length tracks, with an L-track four-point tie-down configuration.
 4. The wheelchair-securement system shall provide a minimum of four wheelchair-securement anchorages attached to the school bus floor with a minimum of two anchorages located at the rear of the space designated for a wheelchair and a minimum of two anchorages located at the front of the space.
 5. The wheelchair-securement system shall provide a minimum of one wheelchair-securement device located in each of the rear anchorages and a minimum of one wheelchair-securement device located in each of the front anchorages.
 6. A wheelchair space shall have a minimum of one wheelchair-passenger shoulder restraint anchorage attached to the interior wall of the school bus and a minimum of two wheelchair-passenger restraint anchorages located at the rear of the space.
 7. Each wheelchair space shall have one wheelchair-passenger restraint. A school bus equipped with a wheelchair-passenger restraint shall have the following information available on the school bus:
 - a. A telephone number where information may be obtained about installation, repair, and parts; and
 - b. Instructions regarding use of the restraint, including a diagram showing the proper placement of the wheelchair and positioning of securement devices and occupant restraints, including correct belt angles.
- F. Dome light:** A dome light shall be placed in the interior ceiling of the school bus to illuminate the wheelchair lift area. The dome light shall be activated by a pressure switch located in the special-service entrance door or by a manually operated switch located in the interior of the school bus no more than one foot from the special-service entrance door. This switch shall be used exclusively for the dome light.
- G. Aisles:** All aisles leading to an emergency door from any wheelchair space shall be a minimum of 30 inches in width. The emergency door opening shall be a minimum of 30 inches in width.
- H. Seating arrangements:** All fixed seats in a special-needs school bus shall be forward facing.

- I. Emblems: A school bus used for transporting disabled passengers shall display two International Symbol of Accessibility emblems. One emblem shall be placed below the upper window on the emergency door or below the window on the special-service entrance door, and the second emblem shall be placed below the windshield on the side of the bus or on the bumper opposite the school bus driver. The emblems shall be made of blue, reflective material and be a minimum of 6 inches and a maximum of 12 inches in width and height and shall contain a reflective white wheelchair impression with a minimum of 1/8 inch reflective white border around the outer edges of the emblems.
- J. Types A and B school buses used to transport disabled passengers shall comply with the specifications contained in this Section except:
1. A ramp may be installed in place of a wheelchair lift;
 2. If a ramp is used, it shall be of a strength and rigidity to support a wheelchair, passenger, and an individual attending the wheelchair passenger. The ramp shall be equipped with a barrier on each longitudinal side to prevent the wheelchair from leaving the ramp;
 3. The floor of the ramp shall be covered with nonskid material; and
 4. A ramp shall not be carried in the passenger compartment of a school bus.

R13-13-106. Minimum Standards for School Bus Chassis

The chassis of a school bus introduced to Arizona on or after May 31, 2008 shall meet the requirements of this Section. The chassis of a school bus introduced to Arizona before May 31, 2008 shall meet the requirements of this Section or shall be maintained in accordance with the manufacturer’s original specifications.

1. Air cleaner: An engine intake air cleaner shall be installed in the school bus that meets engine specifications defined by the school bus manufacturer.
2. Axles: The front and rear axles and suspension assemblies shall have a gross axle weight rating consistent with that stated by the chassis manufacturer on a notice located in the school bus driver's compartment.
3. Back-up alarm: If installed, an alarm that emits a warning sound when the school bus is backing shall conform to the following:
 - a. The alarm-signaling device shall be of electronic, solid state design and shall emit an audible sound of a minimum of 97 dB(A) measured at 4 feet, 0° access from the source of the sound.
 - b. The alarm-signaling device shall be wired into the backup light circuits and shall emit sound automatically when the gear shift lever is in “reverse” position.
 - c. The alarm-signaling device shall be attached to the school bus chassis or body behind the rear axle.
4. Brakes:
 - a. A school bus with a manufacturer-designed passenger capacity of 60 or less shall be equipped with a service-brake system that uses compressed air or hydraulic assist.
 - b. A school bus with a manufacturer-designed passenger capacity greater than 60 shall be equipped with a service- brake system that uses compressed air.
 - c. In addition to the service-brake system, a school bus shall be equipped with a parking-brake system to keep the school bus from moving when parked.
 - d. The service brakes in a compressed-air system shall be adjusted using the following criteria:

<u>Type</u>	<u>Outside Diameter of Air Chamber</u>	<u>Brake Adjustment Limit</u>
<u>6</u>	<u>4 1/2 inches</u>	<u>1 1/4 inches</u>
<u>9</u>	<u>5 1/4 inches</u>	<u>1 3/8 inches</u>
<u>12</u>	<u>5 11/16 inches</u>	<u>1 3/8 inches</u>
<u>16</u>	<u>6 3/8 inches</u>	<u>1 3/4 inches</u>
<u>20</u>	<u>6 25/32 inches</u>	<u>1 3/4 inches</u>
<u>24</u>	<u>7 7/32 inches</u>	<u>1 3/4 inches</u>
<u>30</u>	<u>8 3/32 inches</u>	<u>2 inches</u>
<u>36</u>	<u>9 inches</u>	<u>2 1/4 inches</u>

- e. The service brakes in a “long stroke” clamp type brake system shall be

adjusted using the following criteria:

Type	Outside Diameter of Air Chamber	Brake Adjustment Limit
<u>12</u>	<u>5 11/16 inches</u>	<u>1 3/4 inches</u>
<u>16</u>	<u>6 3/8 inches</u>	<u>2 inches</u>
<u>20</u>	<u>6 25/32 inches</u>	<u>2 inches</u>
<u>24</u>	<u>7 7/32 inches</u>	<u>2 inches</u>
<u>24*</u>	<u>7 7/32 inches</u>	<u>2 1/2 inches</u>
<u>30</u>	<u>8 3/32 inches</u>	<u>2 1/2 inches</u>
<u>*For 3" maximum stroke type 24 chambers</u>		

- f. The service-brake system in a compressed-air system shall contain an emergency-brake system that will activate when the air loss in the service-brake system reaches 20 to 40 pounds per square inch.
- g. A school bus using a compressed-air or hydraulic-assist service-brake system shall be equipped with a signal located in the school bus driver's compartment that emits a continuous audible or visible warning to the school bus driver when:
 - i. The air pressure available in a compressed-air braking system is 60 pounds per square inch or less, or
 - ii. There is a loss of fluid flow from the main hydraulic pump or loss of electric source powering the back-up system in a hydraulic-assist system.
- h. A school bus using a compressed-air service-brake system shall be equipped with one or two illuminated gauges located in the school bus driver's compartment that show the pounds per square inch of compressed air available for the operation of the brake.
- i. A compressed-air brake system with a dry reservoir shall have a one-way valve that will prevent the loss of compressed air between the dry reservoir and the source of compressed air.
- j. A brake system with a wet reservoir shall have a valve located at the bottom of the wet reservoir that operates automatically or can be operated remotely or manually to eject the moisture from the reservoir.
- k. Compressed-air or hydraulic-assist brake lines and booster-assist lines shall be installed in a manner that prevents heat, vibration, and chafing damage.
- l. The brake systems of Types C and D school buses shall be installed so the chassis components can be visually inspected to detect brake lining wear without removal of any of the chassis components.
- 5. Front bumper: The front bumper shall be positioned at the forward-most part of the school bus and extend to the outer edges of the school bus.
- 6. Child alert notification system: A school bus may be equipped with an electronic or mechanical child alert notification system. If a school bus is equipped with a child alert notification system, the device shall be installed in a manner that does not interfere with any other existing operating or electrical component. A child

- alert notification system in a school bus shall not have an override or bypass capability.
7. Clutch: The clutch torque capacity shall be equal to or greater than the engine torque output.
 8. Color: The chassis, including wheels and front bumper, shall be painted black. The hood and fenders shall be painted National School Bus Yellow as described in R13-13-107(6).
 9. Cooling system: A school bus shall be equipped with a cooling system that maintains the engine temperature operating range required to prevent damage to the school bus engine.
 10. Drive shaft: Each section of the drive shaft to the rear driving axle shall be protected by a metal guard around its circumference to reduce the possibility of the drive shaft penetrating through the school bus floor or dropping to the ground.
 11. Electrical system:
 - a. Battery:
 - i. The battery shall have a minimum cold-cranking capacity rating equal to the cranking current required by the engine for 30 seconds at 0° F. and a minimum reserve capacity rating of 120 minutes at 25 amperes.
 - ii. The battery shall have a higher capacity than specified in subsection (11) (a)(i) if optional equipment installed on the school bus requires the higher capacity.
 - iii. Because all batteries are to be secured in a sliding tray in the bus body as required by R13-13-107, chassis manufacturers shall mount batteries temporarily on the chassis frame, except that a van conversion or cutaway front-section chassis may be secured in accordance with the manufacturer's standard configuration. However, in all cases the battery cable provided with the chassis shall have sufficient length to allow some slack, and shall be of sufficient gauge to carry the required amperage.
 - b. Alternator:
 - i. All alternators shall conform to the recommended practices of Standard J180, January 2002 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, which is incorporated by reference and on file with the Department.
 - ii. All Type A-2 and Type B buses with a GVWR of 15,000 pounds or less shall have an alternator with a minimum of 130 amps.
 - iii. All Type A-2 and Type B buses with a GVWR over 15,000 pounds, and all Type C and D buses shall be equipped with a heavy-duty truck or bus-type alternator meeting Standard J180, which is incorporated by reference in subsection (b)(i), having a minimum output rating of 130 amps, and shall produce a minimum current output of 50% of the rating at engine idle speed. The alternator may be either pad-mounted or hinge-mounted.
 - iv. Buses equipped with an electrically powered wheelchair lift or air conditioning may be equipped with a device that monitors the electrical system voltage and advances the engine idle speed when the voltage drops

to, or below, a pre-set level.

v. A belt-driven alternator shall be capable of handling the rated capacity of the alternator with no detrimental effect on any other driven components.

vi. A direct-drive alternator may be installed instead of a belt-driven alternator.

vii. If the school bus is equipped with an air conditioning system, the alternator shall have a minimum charging rate of 160 amperes per hour.

viii. The alternator on a school bus shall contain a regulator to control the voltage to the battery.

c. Wiring:

i. All wiring shall conform to the recommended practices of Standard J1292, October 1981 (no later amendments or editions), published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.

ii. All wiring shall use a standard color or number coding and each chassis shall contain a wiring diagram that details the wiring of the chassis.

iii. The chassis shall be equipped with a connection to provide electrical power to the school bus. The connection shall be located on the chassis cowl or on the engine compartment of a school bus designed without a chassis cowl. The connection shall contain terminals for the main 100 ampere body circuit, tail lamps, right-turn signal, left-turn signal, stop lamps, backup lamps, and instrument panel lights. The instrument panel lights shall have a rheostat control.

12. Engine horsepower: The gross vehicle weight rating of a school bus shall not exceed 185 pounds for each engine horsepower as published by the manufacturer on a notice located on the school bus engine.

13. Exhaust system:

a. The exhaust pipe, muffler, and tailpipe shall be located under the school bus body and attached to the chassis.

b. The tailpipe shall be constructed of a corrosion-resistant tubing material at least equal in strength and durability to 16-gauge steel tubing.

c. The exhaust system on a gasoline-powered chassis shall be insulated from the fuel tank and fuel tank connections by a shield at any point where the exhaust system is 12 inches or less from the fuel tank or fuel tank connections.

14. Frame:

a. A school bus frame shall be of a design and strength capable of supporting the gross vehicle weight of the school bus.

b. A school bus frame shall not be altered for any purpose.

c. Holes in top or bottom flanges of frame rails are not permitted except as provided by the manufacturer. There shall be no welding to the frame rails except by the chassis or body manufacturer or the manufacturer's certified agent.

d. The school bus frame shall not be cracked, loose, sagging, or broken.

e. Brackets securing the cab or the body of the school bus to the frame shall not

- be loose, broken, or missing.
- f. The frame rail flanges shall not be bent, cut, or notched, except as specified by the manufacturer.
 - g. All accessories mounted to the school bus shall be secured as specified by the manufacturer.
 - h. Holes shall not be drilled in the top or bottom rail flanges, except as specified by the manufacturer.
15. Front fenders of a Type C school bus: The outer edges of the front fenders shall be wider than the outer edges of the front tires when the front wheels are in the straight-ahead position.
16. Fuel system:
- a. A school bus shall contain a fuel tank with a minimum 30-gallon capacity, with a minimum dispersion of 25 gallons of fuel to the engine. The fuel tank shall be vented to the outside of the school bus body so fuel spillage will not contact any part of the exhaust system.
 - b. On a Type B, Type C, or Type D school bus, no portion of the fuel system that is located outside of the engine compartment, except the filler tube, shall extend above the top of the chassis frame.
 - c. A fuel filter with replaceable element shall be installed between the fuel tank and engine.
 - d. The fuel line that supplies fuel to the engine shall be located at the top of the fuel tank.
17. Horn: A school bus shall be equipped with at least one horn capable of producing a sound level between 82 and 102 dB(A) when tested according to the Standard J377, March 2001 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.
18. Instruments and instrument panel:
- a. The chassis shall be equipped with the following instruments:
 - i. Speedometer;
 - ii. Odometer that will give accrued mileage to seven digits, including tenths of miles;
 - iii. Voltmeter or ammeter;
 - iv. Oil pressure gauge;
 - v. Water temperature gauge;
 - vi. Fuel gauge;
 - vii. Upper beam head lamp indicator;
 - viii. Brake system signal as required by R13-13-106(4)(f);
 - ix. Turn signal indicator; and
 - x. Air pressure or hydraulic gauge.
 - b. The instruments shall be mounted on the instrument panel in the school bus driver's compartment and visible to the school bus driver while seated in the driver's seat.
 - c. The instrument panel shall be equipped with a rheostat switch that controls the illumination to the instrument panel and the gear shift selector indicator.

19. Oil filter: A replaceable element or cartridge-type oil filter shall be provided with a minimum capacity that meets or exceeds the capacity recommended by the manufacturer of the school bus engine.
20. Openings: All openings in the floorboard and in the fire wall between the chassis and passenger compartment shall be sealed.
21. Splash guards:
- a. A school bus shall be equipped with rear fender splash guards constructed of flexible rubberized material.
 - b. The splash guards shall be wide enough to cover the tire tread width, installed close enough to the tire tread surface to control side-throw of road surface material, and extend to within 8 inches of ground level.
22. Steering system:
- a. Power steering is required on all school buses manufactured after January 1, 1984.
 - b. Bracing extending from the center of the steering wheel to the steering wheel ring shall not be cracked or missing.
 - c. The distance of movement of the steering wheel between two points of resistance shall not be greater than the following when measured with the engine running:

<u>Steering wheel diameter</u>	<u>Power steering</u>	<u>Manual steering</u>
<u>16 in. or less</u>	<u>6 3/4 inches</u>	<u>4 1/2 in.</u>
<u>18 in.</u>	<u>7 1/8 inches</u>	<u>4 3/4 in.</u>
<u>20 in.</u>	<u>7 7/8 inches</u>	<u>5 1/4 in.</u>
<u>22 in.</u>	<u>8 5/8 inches</u>	<u>5 3/4 in.</u>

- d. There shall be clearance of at least 2 inches between the steering wheel and any object in the driver's compartment.
 - e. A non-adjustable steering column shall be fastened in a fixed position. An adjustable steering column shall be equipped with a locking mechanism.
 - f. The steering gear housing shall not have loose or missing mounting bolts. There shall not be cracks in the gear housing or its mounting brackets.
 - g. The connecting arm on the steering gear power source shall not be loose.
 - h. The steering wheel shall turn freely in both directions.
 - i. The steering system shall have a means for lubrication of all wear-points.
23. Suspension:
- a. Shock absorbers:
 - i. A school bus shall be equipped with front and rear double-acting shock absorbers. Replacements to shock absorbers shall be made according to the specifications of the manufacturer's part number as stamped on the shock absorber.
 - ii. If a school bus is manufactured with tandem rear axles, rear shock absorbers are not required.
 - b. Suspension system:

- i. Capacity of suspension assemblies shall be commensurate with the chassis manufacturer's gross vehicle weight rating.
- ii. If leaf-type rear springs are used, they shall be a progressive rate or multi-stage design.

24. Tires and wheels:

- a. Tires and wheels shall have an accumulated load rating at least equal to the gross vehicle weight rating.
- b. Dual rear tires shall be provided on all school buses that have a gross vehicle weight rating of more than 10,000 pounds.
- c. Each tire on a particular axle shall be the same size.
- d. All tires on a school bus shall be bias or all tires on a school bus shall be radial and shall not differ more than one size between front and rear axles.
- e. On a Type C or D school bus, a spare tire, if present, shall be in a carrier mounted outside the passenger compartment.

25. Transmission: The school bus transmission shall have no fewer than three forward speeds and one reverse speed.

26. Turning radius:

- a. A chassis with a wheelbase of 264 inches or less shall have a right and left turning radius of not more than 42 1/2 feet, as measured to the edge of the front tire at the outside of a circle as the school bus moves within the circle.
- b. A chassis with a wheelbase of more than 264 inches shall have a right and left turning radius of not more than 44 1/2 feet, as measured to the edge of the front tire at the outside of a circle as the school bus moves within the circle.

27. Weight:

- a. The gross vehicle weight of a school bus shall not exceed the chassis manufacturer's gross vehicle weight rating for the chassis as recorded on a notice located in the school bus driver's compartment.
- b. To calculate the gross vehicle weight of a school bus, add the chassis weight, the school bus body weight, the school bus driver's weight, and the total seated passenger weight.
 - i. For the purpose of calculation, the school bus driver's weight is 150 pounds.
 - ii. For the purpose of calculation, the passenger weight is 120 pounds per seated passenger.
- c. The weight distribution of a school bus on a level surface that is fully loaded according to the gross vehicle weight rating shall not exceed the front axle gross weight rating or rear axle gross weight rating as recorded on a notice located in the school bus driver's compartment.

R13-13-107. Minimum Standards for School Bus Body

The body of a school bus introduced to Arizona on or after May 31, 2008 shall meet the requirements of this Section. The body of a school bus introduced to Arizona before May 31, 2008 shall meet the requirements of this Section or shall be maintained in accordance with the manufacturer's original specifications.

1. Air conditioning system: The school bus may be installed with an air conditioning system. If installed, the air conditioning system shall:
 - a. Be of a mechanical vapor compression refrigeration type;
 - b. Be manufactured to conform to the requirements of Standard J639, June 2005 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department;
 - c. Have sufficient power for simultaneous cooling, circulating, and dehumidifying the air;
 - d. Be provided with refrigerant that is nontoxic, nonflammable, and non-explosive;
 - e. Have all power and grounding installed according to the manufacturer's specifications; and
 - f. Have exhaust system exit from the rear of the vehicle, and extend to, but not more than 2 inches beyond the outer edge of the rear bumper.
2. Aisle:
 - a. The center aisle of a school bus shall have a clearance of not less than 12 inches at the bottom of the seat cushion, increasing to 15 inches at the top of the seat backs.
 - b. Aisles to side emergency doors shall have a minimum clearance of 12 inches which may be achieved by using flip-up type seats.
3. Auxiliary fan:
 - a. An auxiliary fan, if installed, shall be placed in a location that does not obstruct the school bus driver's view of any mirror located on the school bus.
 - b. An auxiliary fan, if installed, shall have a 6-inch nominal diameter, with the fan blades covered by a protective cage.
 - c. Each installed auxiliary fan shall be controlled by a switch that is independent of any other electrical system.
4. Battery:
 - a. A battery shall be secured to a slide-out or swing-out tray in a vented compartment in the school bus body, so the battery is accessible to the outside for servicing. If the battery compartment has a door that is not removable, the door shall be secured by a fastening device when the door is in a closed position. If the battery compartment has a removable cover, the cover shall be secured by a fastening device when the cover is in place.
 - b. The word "Battery" shall be printed in unshaded black letters that are no more than 2 inches in height on the battery-compartment door or cover or immediately above the battery-compartment door or cover.
 - c. Buses with a battery located under the engine hood are exempt from these

provisions.

5. Belt cutter: A school bus with passenger seat belts shall be equipped with a belt cutter having a full width handgrip and a protected, replaceable or non-corrodible blade. The belt cutter shall be mounted in a location accessible to the seated driver, and in an easily detachable manner. The belt cutter shall be accessible only to the school bus driver.

6. Color:

a. A school bus body shall be painted National School Bus Yellow according to the following specifications and tolerances:

<u>Description</u>	<u>Reflectance</u>	<u>Chromaticity</u>	
		<u>X</u>	<u>Y</u>
<u>Centroid</u>	<u>41.5%</u>	<u>.5139</u>	<u>.4434</u>
<u>V+ Light Limit</u>	<u>42.9%</u>	<u>.5139</u>	<u>.4427</u>
<u>V- Dark Limit</u>	<u>39.8%</u>	<u>.5133</u>	<u>.4422</u>
<u>H+ Green Limit</u>	<u>41.6%</u>	<u>.5123</u>	<u>.4368</u>
<u>H- Red Limit</u>	<u>41.7%</u>	<u>.5168</u>	<u>.4489</u>
<u>C+ Vivid Limit</u>	<u>41.5%</u>	<u>.5188</u>	<u>.4457</u>
<u>C- Weak Limit</u>	<u>41.5%</u>	<u>.5095</u>	<u>.4405</u>

b. The bumpers, lamp hoods, lettering, and rub rails on a school bus body shall be black.

7. Crossing control arm:

a. A school bus may be equipped with a crossing control arm. If installed, all components and all connections of the crossing control arm shall:

i. Meet the requirements set forth in Standard J1133, November 2004 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department;

ii. Be mounted on the right side of the front bumper;

iii. When opened, extend in a line parallel to the body side and aligned with the right side wheel;

iv. Be weatherproofed;

v. Incorporate system connectors (electrical, vacuum, or air) at the gate and be easily removable to allow for towing of the school bus;

vi. Be constructed of non-corrodible or nonferrous material, or treated in accordance with the school bus body sheet metal specification;

vii. Have no sharp edges or projections that could cause injury or be a hazard to students;

viii. Be rounded at the end of the crossing control arm;

ix. Extend approximately 70 inches (measured from the bumper at the arm assembly attachment point) when in the extended position;

x. Not extend past the end of the bumper when in the stowed position;

xi. Extend simultaneously with the stop signal arm, activated by the stop signal arm control; and

xii. Include a device attached to the bumper near the end of the arm to automatically retain the arm while in the stowed position. The device shall not interfere with the normal operations of the crossing control arm.

b. An automatic recycling interrupt switch may be installed for temporarily disabling the crossing control arm.

8. Defrosters:

a. Defrosting and defogging equipment shall direct a flow of heated air onto the windshield, the window to the left of the driver, and the glass in the viewing area directly to the right of the driver to eliminate frost, fog, and snow.

b. The defrosting system shall conform to Standards J381 September 2000 (no later amendments or editions) and J382, September 2000 (no later amendments or editions), both published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001 incorporated by reference and on file with the Department.

c. An auxiliary fan shall not to be used in place of a defrosting and defogging system.

d. A portable heater shall not be used in place of a defrosting or defogging system.

9. Electrical wiring:

a. All electrical wiring on a school bus shall conform to the standards contained in Standard J1292, October 1981 (no later amendments or editions), published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001 and incorporated by reference and on file with the Department.

b. Electrical wiring that is coded by color shall be coded as follows:

- i. Left Rear Directional Light: Yellow
- ii. Right Rear Directional Light: Dark Green
- iii. Stoplights: Red
- iv. Back-up Lights: Blue
- v. Taillights: Brown
- vi. Ground: White
- vii. Ignition Feed, Primary Feed: Black

c. Circuits: Electrical wiring circuits shall be protected by a fuse, circuit breaker, or Field Effect Transistor and shall be coded by number or color on an electrical wiring diagram located in the driver's compartment or the electrical access panel door. There shall be at least seven circuits as follows:

- i. Head, tail, stop, and instrument panel lamps;
- ii. Clearance and step-well lamps;
- iii. Dome lamps;
- iv. Ignition and emergency door signal;
- v. Turn signal lamps;
- vi. Alternately flashing signal lamps; and
- vii. Heaters and defrosters.

d. All electrical wires passing through metal openings shall be protected by a non-metal grommet.

- e. Electrical wires not enclosed within the school bus body shall be fastened at intervals of not more than 18 inches.
- 10. Emergency exits: A door, push-out window, or roof hatch used as an emergency exit shall conform to the following:
 - a. On the inside and outside of a school bus, the words “EMERGENCY EXIT” or “EMERGENCY DOOR” shall be printed in black, unshaded letters at least 2 inches high above an emergency door or push-out window and at least 1 inch high on a roof hatch.
 - b. Each emergency exit shall open toward the exterior of the school bus and shall be labeled within 6 inches of the interior release mechanism with black lettering at least 3/8 of an inch high instructing how the exit is to be opened.
 - c. On a Type A school bus with double rear doors used as emergency exits, the rear doors shall be secured with upper, center, and lower latches to the door frame.
 - d. The upper portion of each door used as an emergency exit shall be equipped with a window made of safety glass with an area not less than 400 square inches. A door located in the rear end of the school bus used as an emergency exit shall also contain a lower window panel of safety glass of not less than 350 square inches. A Type A school bus that contains double rear doors used as emergency exits is exempt from this provision.
 - e. There shall be no steps on the outside of the school bus leading to an emergency exit.
 - f. A header pad filled with a material to protect against injury shall be attached to the top edge of the frame of a door used as an emergency exit. The header pad shall be a minimum of 3 inches wide and 1 inch thick and extend the full width of the door opening.
 - g. Each emergency exit shall be equipped with a latch that opens from the inside of the school bus and is connected to an electrical buzzer audible in the driver’s compartment that actuates when the latch is being released.
 - h. Except for interlock/barrel bolt devices, if a lock is installed on an emergency exit, the lock shall be secured only by using a key and shall deactivate the ignition system of the school bus when locked.
- 11. Emergency equipment:
 - a. All emergency equipment shall be mounted in the driver’s compartment or adjacent to either side of the service entrance and shall be readily accessible. If the emergency equipment is mounted within a closed compartment, the compartment shall be clearly labeled as containing the emergency equipment.
 - b. Fire extinguisher:
 - i. A school bus shall be equipped with a minimum of one 5-pound pressurized, dry, chemical fire extinguisher of a type rated not less than 2A-10-BC by the Underwriter’s Laboratories, Inc., as described by the National Fire Protection Association, Inc., One Batterymarch Park, Quincy, MA 02269, in NFPA 10: Standard for Portable Fire Extinguishers, published in 2006 (no later amendments or editions), incorporated by reference and on file with the Department.

- b. Each school bus owned by a school or a private company shall display either the name of the school and school number, if any, or the name of the private company on each exterior side of the school bus between the rub rails at the center line and seat cushion levels in black unshaded letters that are at least 5 inches in height. Additionally, a school bus owned by a private company that displays the name of the school and school number as described above, may display the company's name on each exterior side of the school bus below the floor line in black unshaded letters that are a maximum of 2 inches in height.
 - c. An identification number assigned to a school bus by an owner shall be placed on the front and rear bumpers of the school bus and on each exterior side of the school bus below the floor line rub rail and forward of the centerline of the school bus. The identification number on each bumper shall be National School Bus Yellow. The identification number on each exterior side shall be black. Each identification number shall be a minimum of 5 inches in height.
 - d. In addition to an identification number, a school bus may be identified by an emblem placed on the loading side of the front bumper or the exterior wall of the loading side below the floor line rub rail and forward of the center line of the school bus, or both. The emblem shall be painted or decaled on or attached to a magnetic backing.
 - e. In addition to an identification number, a school bus may display a route identification sign. If displayed, the route identification sign shall:
 - i. Be installed with a heavy duty Velcro, magnetic, screw-type or similar fixture;
 - ii. Be a minimum of 5 inches in height; and
 - iii. Be located on a flat surface of the bus body, excluding glass.
16. Interior: If the ceiling is constructed with overlapping panels, the first panel placed in the ceiling shall be overlapped by the following panel and each panel shall consecutively overlap to the rear end of the school bus. Exposed edges in the interior of the school bus shall be beaded, hemmed, flanged, or rounded to eliminate sharp edges.
17. Lamps and signals:
- a. All lamps on the exterior of a school bus shall conform to the provisions contained in 49 CFR 393.9 et seq. of the Federal Motor Carrier Safety Regulations, October, 2006 (no later amendments or editions) published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D.C. 20402-9328, incorporated by reference and on file with the Department.
 - b. Interior lamps shall be provided that illuminate the center aisle and step well.
 - c. Alternately flashing signal lamps:
 - i. When a school bus is equipped with a four-lamp system, the system shall consist of two red alternately flashing signal lamps located one on the left and one on the right above the rear windows of the school bus and two red alternately flashing signal lamps located one on the left and one on the right above the windshield.
 - ii. When a school bus is equipped with an eight-lamp system, the four red

- alternately flashing signal lamps shall be installed as described in subsection (14)(c)(i) and the four amber alternately flashing signal lamps shall be installed as follows: one amber alternately flashing signal lamp shall be located adjacent to each red alternately flashing signal lamp, at the same level, but closer to the vertical centerline of the school bus. The system of red and amber alternately flashing signal lamps shall be wired so the amber alternately flashing signal lamps are activated manually and the red alternately flashing signal lamps are activated automatically or manually.
- iii. Except for LED lamps, each alternately flashing signal lamp shall be covered by a lamp hood.
- d. Turn signal and stop lamps:
- i. Except as provided in subsections (17)(d)(iii) and (17)(d)(iv), all school buses shall be equipped with amber side-mounted turn signals. The turn signal lamp on the left side of the bus may be mounted rearward of the stop signal arm and the turn signal lamp on the right side may be mounted rearward of the entrance door.
- ii. Except on Type A school buses, a school bus body shall be equipped with rear turn signal lamps that are at least 7 inches in diameter, or if the lamp shape is other than round, a minimum of 38 square inches of illuminated area. The lens area of the rear turn signal lamps on Type A school buses shall be at least 21 square inches. The rear turn signal lamps shall be connected to the hazard warning switch located in the driver's compartment to allow the school bus driver to activate simultaneous flashing of turn signal lamps when needed as a traffic hazard warning. The rear turn signal lamps shall be located to the far left and right sides of the flat surface of the rear of the school bus body and below the rear window.
- iii. A Type C school bus may have a double-faced turn signal lamp that is visible from the front and rear of the school bus and mounted on the tops or sides of both front fenders or may have a turn signal lamp mounted on the left and right sides of the grill and may have a turn signal lamp mounted on each side of the school bus body between the window line and the second rub rail and forward of the vertical centerline.
- iv. A Type D school bus may have a turn signal lamp mounted at the front of the school bus body above each head lamp and may have a turn signal lamp mounted on each side of the school bus body between the window line and second rub rails and forward of the vertical centerline of the school bus.
- v. A 7 inch diameter stop lamp, or if the lamp shape is other than round, a stop lamp with a minimum of 38 square inches of illuminated area shall be located toward the centerline and adjacent to each of the rear turn signal lamps.
- e. Backup lamps: A school bus shall be equipped with two backup lamps with clear lenses, located one on the right and one on the left rear panels below the rear windows.

- e. The rear bumper shall not be equipped with footholds or handles.
 - f. A Type A school bus equipped with the chassis manufacturer's rear bumper is exempt from subsections (22)(a) through (22)(c).
23. Restraining barrier:
- a. The restraining barrier shall be a minimum of 38 inches high as measured from the interior floor of the school bus to the top of the restraining barrier.
 - b. The restraining barrier shall be the same width as the seat directly behind the restraining barrier.
24. Rub rails:
- a. There shall be no fewer than two rub rails located on a school bus as follows:
 - i. One rub rail shall be located on each side of the school bus approximately at seat cushion level and shall extend from the rear post of the service door frame completely around the school bus body, excluding the emergency door, to the front post of the school bus driver's window.
 - ii. One rub rail shall be located on each side of the school bus approximately at the floor line and shall extend from the rear post of the service door frame to the rear corner post of the school bus body and from the front post of the school bus driver's window to the rear corner post on the driver's side
 - b. Rub rails are not required on emergency doors, special-service entrance door, access panels and compartment doors, and wheel well openings.
 - c. Each rub rail shall be attached on the outside of the school bus body at each structural post in the school bus body.
 - d. Each rub rail shall be a minimum of 4 inches in width and constructed of corrugated or ribbed 16-gauge steel.
25. Seat belt for school bus driver: A seat belt for the school bus driver shall be installed in the driver's compartment. The seat belt shall be equipped with a retractor on each side of the school bus driver's seat to keep the seat belt retracted and off the floor when not in use.
26. Seats:
- a. Each seat shall have a minimum depth of 15 inches measured from the front of the seat cushion to the seat back.
 - b. Each seat shall be a minimum of 38 inches in height measured from the interior floor of the school bus to the top of the back cushion.
 - c. Seat spacing shall meet the requirements of 49 CFR 571.222, October 2006 (no later amendments or editions), published at the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, D. C. 20402-9328, incorporated by reference and on file with the Department. Seat spacing shall not be less than 24 inches between the front of a seat back cushion to the back surface of the cushion on the preceding seat. Seat spacing shall be measured at cushion height, at the center of the seat, on a plane parallel to the center line of the bus. The seat upholstery may be placed against the seat cushion padding, but without compressing the padding, before measurement is taken.
 - d. The school bus driver's seat shall be adjustable, without the use of tools, both

vertically and horizontally for a minimum of 4 inches. Seats with vertical adjustments are not required on Types A and B school buses.

27. Service door:

- a. The service door shall be located on the right side of the school bus opposite the school bus driver and within direct view of the school bus driver when seated in the school bus driver's seat. Types A and B school buses are exempt from this provision.
- b. The service door shall have a minimum horizontal opening of 24 inches and a minimum vertical opening of 68 inches. Type A school buses shall have a service door with a minimum opening of 1200 square inches.
- c. Windows in the upper and lower panels of the service door shall be made of safety glass. The bottom of each lower window panel shall be no more than 10 inches from the top surface of the lower step of the service entrance. The top of each upper window panel shall be no more than 6 inches below the top of the service door. Type A buses are exempt from this provision.
- d. To protect passengers' fingers, a flexible rubber material shall be attached by number 10 3/4 inch metal screws to the opening and closing edges of the service door. Type A school buses are exempt from this provision.
- e. The service door shall open towards the exterior of the school bus. A Type A school bus is exempt from this provision if the service door is provided by the school bus chassis manufacturer.
- f. A header pad, filled with a material to protect against injury, shall be attached to the top edge of the frame of the service door. The header pad shall be at least 3 inches wide and 1 inch thick and extend the full width of the service entrance.
- g. A Type A school bus with the chassis manufacturer's standard service entrance is exempt from subsections (27)(a) through (27)(d).

28. Steps:

- a. The risers of the steps in the service entrance shall be equal. When plywood is laid over the steel floor of the school bus, the height of the top step may be increased by the thickness of the plywood.
- b. The first step at the service entrance shall be no less than 10 inches and no more than 16 inches from the ground.
- c. Steps shall be enclosed in the school bus body.
- d. Steps shall not extend beyond the side of the school bus body.
- e. A handrail not less than 10 inches in length shall be provided inside the doorway.

29. Step treads:

- a. All steps, including the floor-line platform area, shall be covered with ribbed or non-skid floor-covering material that is mounted on a metal plate.
- b. The metal back of the step tread shall be a minimum 24-gauge cold rolled steel and shall be permanently bonded to the ribbed or non-skid material.
- c. If ribbed material is used, the ribbed design shall run from the risers toward the service entrance. Each step tread shall have a 1 1/2 inch white nosing.

30. Stirrup steps: There shall be a handle and at least one folding stirrup step or

recessed foothold located on each side of the front of a school bus for accessibility for cleaning the windshield and lamps. Type A school buses are exempt from this provision.

31. Stop signal arm:

- a. School buses shall be equipped with a stop signal arm on the left side of the school bus body that extends 90° from the school bus body when opened.
- b. The stop signal arm shall be either air or electrically driven, and meet the requirements of Standard J1133, November 2004 (no later amendments or editions) published by the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001, incorporated by reference and on file with the Department.
- c. The stop signal arm shall be an 18-inch octagon, constructed of a red material that reflects light, with the word “STOP” printed on both sides in white letters not less than 5 inches high. Additionally, the word “STOP” may be illuminated by a light-emitting diode system on both sides of the stop signal arm.

32. Sun shield: An interior adjustable transparent sun shield or visor not less than 6 inches x 30 inches with a finished edge shall be installed over the windshield in the driver’s compartment. School buses with a gross vehicle weight rating of 10,000 pounds or less are exempt from this provision.

33. Tailpipe:

- a. The tailpipe shall extend to, but not more than 2 inches beyond, the outer edge of the rear bumper;
- b. The tailpipe shall exit in the rear of the vehicle behind the rear drive axle, and shall be placed according to the manufacturer’s specifications; and
- c. The tailpipe shall not exit beneath any fuel filler location or beneath any emergency door.

34. Undercoating:

- a. The entire underside of the school bus body, including floor sections, cross member and below-floor-line side panels, shall be coated with rust-proofing material for which the material manufacturer has issued to the bus body manufacturer notarized certification that materials meet or exceed all performance and qualitative requirements of paragraph 3.4 of Federal Specification TT-C-520B, Coating Compound, Bituminous, Solvent Type, Underbody (For Motor Vehicles), February 2, 1973 (no later amendments or editions), published by the General Services Administration acting as an agent for the Superintendent of Documents, Washington D.C. 20402, and incorporated by reference and on file with the Department. Modified test procedures shall be used for the following requirements:
 - i. Salt spray resistance – test modified to 5% salt and 1,000 hours,
 - ii. Abrasion resistance, and
 - iii. Fire resistance.
- b. Test panels shall be prepared in accordance with paragraph 4.6.12 of Federal Specification TT-C-520B, with a modified procedure requiring that the test shall be made on a 48-hour air-cured film at a thickness recommended by the

- material manufacturer.
- c. Undercoating is not required if the underside of the school bus is constructed of noncorrosive material.
 - d. The undercoating material shall be applied with suitable airless or conventional spray equipment to the recommended film thickness and shall show no evidence of voids in the cured film.
35. Ventilation: An immovable, non-closing exhaust ventilator shall be installed in the school bus roof.
36. Wheel housing:
- a. The wheel-housing opening shall be large enough to allow for the removal of the tire and wheel.
 - b. The wheel housing shall be constructed of 16-gauge steel or fiberglass of equal strength and sealed to the school bus floor.
 - c. The wheel housing shall not extend more than 12 inches above the floor inside the school bus body and shall not extend into the emergency door opening.
 - d. The wheel housing shall provide clearance for tire chains installed on the tires of the driving wheels.
37. Windows: Each side window in the passenger compartment of a school bus body shall provide an unobstructed opening of at least 190 square inches when the window is open.
38. Windshield washer system: A windshield washer system that provides an application of cleaning solution to the windshield shall be installed.
39. Windshield wipers:
- a. A windshield wiping system with a minimum of two speeds shall be provided.
 - b. The windshield wipers shall be operated by one or more air or electric motors.

R13-13-108. Inspection, Maintenance, and Alterations

- A. A school bus shall be inspected by the Department before the school bus is introduced into Arizona to transport passengers.**
- 1. After inspecting a school bus, the Department shall place a decal that contains a number used by the Department to identify the school bus above the school bus driver's side window in the driver's compartment. This decal shall not be removed from the school bus while it is operated in Arizona except by the Department. Before the school bus is transferred or retired from service, the school bus owner shall contact the Department to have this decal removed.**
 - 2. If the Department finds that no major defect exists on a school bus, the Department shall place a safety inspection decal that contains the month and year of inspection on the right side of the centerline of the windshield of the school bus in a position that does not interfere with the school bus driver's line of vision.**
 - 3. If the Department finds a major defect on the school bus, the Department shall place the school bus out of service. Before the school bus may be placed back into service, the Department shall reinspect the school bus to determine that the major defect has been corrected. If the major defect has been corrected, the Department shall place a safety inspection decal on the school bus in accordance with subsection (A)(2).**
 - 4. If the Department finds a minor defect on a school bus, the Department shall issue an inspection order, but the school bus may be operated to transport passengers while the minor defect is being corrected. A copy of the inspection order shall be returned to the Department within 15 working days from the date of inspection and shall show that the minor defect has been corrected unless, in accordance with the provisions of subsection (A)(5), the school bus owner obtains an extension of time to correct the minor defect.**
 - 5. Upon receipt of a written request from the school bus owner, the Department shall grant one or more extensions of time to correct a minor defect if:**
 - a. The school bus owner submits to the Department written documentation that the:**
 - i. School bus owner's action or inaction did not cause or contribute to the delay in completing the repair;**
 - ii. School bus owner has secured a written estimated expedited delivery or completion date from the provider of the materials or services required to complete the repair; and**
 - iii. School bus owner made reasonable attempts to secure the materials or services, or materials or services of equivalent quality, at a substantially similar price from alternate sources; and**
 - b. The Department determines that an extension of time to correct the minor defect will not increase the probability of an accident involving the school bus or passengers or the risk of injury to the school bus driver or passengers.**
 - 6. Each extension of time shall be for 60 days or less. The Department shall determine the length of each extension of time after giving consideration to the information provided under subsection (A)(5)(a). When the minor defect is**

corrected, the school bus owner shall return to the Department a copy of the inspection order issued by the Department.

7. If a minor defect on a school bus is not corrected within 15 working days or at the end of an extension period, if applicable, the Department shall remove the safety inspection decal and the school bus shall be placed out of service until further inspection by the Department shows that the minor defect is corrected.

B. The Department shall use the following criteria to determine whether a major or minor defect is present on a school bus introduced into Arizona on or after February 16, 1996. For a school bus introduced into Arizona before that date, the Department shall determine whether the school bus is in an unsafe condition by using the following criteria or those at A.A.C. R17-4-612. A defect that causes a school bus introduced into Arizona before February 16, 1996 to be in an unsafe condition shall be deemed a major defect as defined in this Article.

<u>INSPECTION ITEM</u>	<u>MAJOR DEFECT</u>	<u>MINOR DEFECT</u>
<u>Air conditioning system, if installed</u>	<u>Missing hose covers or trim panels</u> <u>Missing air conditioning louvres</u> <u>Loose or missing air conditioning mounting fasteners</u> <u>Refrigerant leaks from evaporators or hoses in the interior of the bus</u> <u>Broken compressor brackets</u> <u>Broken mounting bolts</u> <u>Electrical wiring hanging out of evaporator covers</u> <u>Missing evaporator covers</u> <u>Missing air diffusers</u> <u>Evaporators not secured to ceiling or bulkhead</u>	<u>Broken or loose evaporator covers</u> <u>Unsecured refrigerant hoses</u> <u>Loose, missing or severely cracked belts</u>
<u>Alarm, back-up, if installed</u>		<u>Low volume</u> <u>Not working</u>
<u>Auxiliary fan, if installed</u>	<u>Obstructs school bus driver's view of any mirror</u> <u>Used in place of defrosting or defogging system</u> <u>Not covered by protective cage</u>	<u>Incorrect size</u> <u>Not controlled by independent switch</u>
<u>Battery (Types C and D buses only)</u>	<u>Not mounted according to the manufacturer's instructions</u>	<u>Incorrect or no identification</u>
<u>Belt cutter</u>	<u>Missing</u>	
<u>Body fluid cleanup kit</u>	<u>Absence of body fluid cleanup kit</u> <u>Any item missing from body fluid cleanup kit</u>	

<u>Brakes, compressed air</u>	<u>Inoperative or missing visual or audible low air signal</u> <u>Compressed-air gauge missing</u> <u>Grease or oil leakage into brake system</u> <u>Exposed or damaged ply on any air hose</u> <u>Air capacity less than 90 pounds per square inch at idle speed</u> <u>Wet-reservoir valve missing or inoperative</u> <u>Leaking, cracked, or broken hose or connection</u> <u>Audible air leak</u> <u>Pushrod exceeds limitation</u> <u>Low-air warning system does not activate at 60 psi and remains activated at less than 60 psi</u>	
<u>Brakes, hydraulic-assisted</u>	<u>Inoperative or missing visual or audible signal</u>	
<u>Brakes, emergency-brake system</u>	<u>Inoperative</u> <u>Does not activate when service brake system reaches 20 to 40 pounds psi</u>	
<u>Bumpers</u>	<u>Break or rip</u> <u>Loose bumper</u> <u>Foothold or handle present on rear bumper</u>	<u>Not painted black</u>
<u>Cooling system</u>		<u>Leak in system</u> <u>Fluid level in radiator not full</u>
<u>Crossing control arm, if installed</u>	<u>Has sharp edges or projections that could injure a student</u> <u>Will not retract</u>	<u>Not working</u> <u>Fails to open completely</u>
<u>Defroster</u>	<u>Inoperative</u> <u>Ventilation opening blocked</u>	

<u>Drive shaft</u>	<u>Absence of protective metal guard installed by the manufacturer around the drive shaft to any driving axle</u>	
<u>Dust boots</u>	<u>Missing, torn, split, or loose around floor-mounted gear shift, parking brake handle, or steering column.</u>	
<u>Emergency warning devices</u>	<u>Having fewer than two operable</u>	<u>Missing one</u>
<u>Emergency door</u>	<u>Inoperative latch</u> <u>Broken or missing portion of seal around door</u> <u>Window not of safety glass</u> <u>Inoperative warning device</u> <u>Lock is not the ignition shut-off type</u>	<u>No header pad</u>
<u>Emergency exit</u>	<u>Inoperative warning device or latch on all emergency</u> <u>exits except roof exit</u> <u>Not properly identified</u> <u>Header pad missing or damaged</u> <u>Broken seal around window</u>	<u>Inoperative roof exit</u>
<u>Engine compartment</u>	<u>Inoperative hood latch</u>	<u>Deterioration of hose, belt, or wiring</u> <u>Deterioration of battery hold-down clamp, corrosive acid buildup on terminal</u>
<u>Exhaust system</u>	<u>Exhaust leak</u> <u>Exhaust tailpipe extends more than 2 inches beyond the outer edge of the rear</u> <u>bumper or fails to terminate flush with the outside edge of the school bus body in the rear</u> <u>of the school bus</u>	<u>Exhaust pipe bracket not attached to the chassis and the tailpipe</u> <u>End of tailpipe pinched or bent</u>

<u>Exterior paint</u>		<u>Exposed metal or base primer</u> <u>Incorrect color</u>
<u>Fire extinguisher</u>	<u>Absence of fire extinguisher</u> <u>Not at full charge</u>	<u>Not mounted in required position</u>
<u>First-aid kit</u>	<u>Absence of first-aid kit</u> <u>Three or more items missing from first-aid kit</u>	<u>One or two items missing from first-aid kit</u>
<u>Frame</u>	<u>Crack in frame</u> <u>Cracked, loose, or missing body mount or body-mount bolt</u> <u>Welded repair not performed by body or chassis manufacturer or manufacturer's certified agent</u>	
<u>Fuel system</u>	<u>Fuel tank not mounted to the chassis frame or not vented to outside of engine compartment</u> <u>Fuel system extends above chassis frame (does not apply to filler tube or Type A bus)</u> <u>Fuel tank bracket cracked or broken</u> <u>Leaking tank or fuel line</u> <u>Fuel line attached to bottom of fuel tank</u> <u>Missing or improper fuel cap</u>	
<u>Handrail</u>	<u>Handrail does not pass the inspection procedure described in R13-13-107(13)</u>	
<u>Heating system</u>	<u>Heater missing or inoperative</u> <u>Heater line in interior of school bus not covered by protective shield</u> <u>No shutoff valve</u>	<u>Unsecured heater hose</u> <u>Inadequate heat-producing capacity</u>
<u>Horn</u> <u>(Air or electrical)</u>	<u>Missing or inoperative</u>	

<u>Instrument panel</u>	<u>Missing or inoperative ignition power-deactivation switch if the ignition does not use a key.</u> <u>Any inoperative gauge or switch, except auxiliary fan switch</u> <u>Improper illumination</u>	<u>Inoperative auxiliary fan switch</u>
<u>Interior, aisles</u>	<u>Incorrect clearance</u>	
<u>Interior, seats</u>	<u>Broken, cracked, exposed, or loose seat frame</u> <u>Screw or mounting bolt missing</u>	
<u>Interior, floor covering</u>	<u>Hole</u> <u>Improper material</u> <u>Improperly bonded</u> <u>Loose metal trim</u>	
<u>Lamps, clearance</u>	<u>Inoperative</u> <u>Cracked, broken, or missing lens</u>	<u>Incorrect color</u> <u>Dust behind lens</u>
<u>Lamps, head</u>	<u>Low beam inoperative</u> <u>Not mounted as required by 49 CFR 393.24</u> <u>Both high beams inoperative</u>	<u>One high beam inoperative</u> <u>Inoperative dimmer switch on a bus not operated when head lamps are required</u> <u>Cracked, broken, or missing lens</u>
<u>Lamps, back-up</u>	<u>Inoperative</u>	<u>Incorrect color</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, interior Over aisle</u>		<u>Inoperative</u> <u>Cracked, broken, or missing lens</u>
<u>Lamps, interior Over step-well</u>	<u>Inoperative</u>	<u>Cracked, broken, or missing lens</u>
<u>Lamps, turn signal</u>	<u>Inoperative</u>	<u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u> <u>Incorrect size</u> <u>Incorrect location</u>

<u>Lamps, strobe, if installed</u>	<u>Pilot or strobe lamp missing or inoperative</u> <u>Cracked, broken, or missing lens</u> <u>Incorrect color</u> <u>Incorrect location</u>	
<u>Lamps, identification</u>		<u>Inoperative</u> <u>Incorrect color</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, hazard</u>	<u>Inoperative</u>	
<u>Lamps, stop</u>	<u>Both inoperative</u>	<u>One inoperative</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, tail</u>	<u>Both inoperative</u>	<u>One inoperative</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, side marker</u>		<u>Inoperative</u> <u>Incorrect color</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lamps, alternately flashing signal</u>	<u>One or more inoperative lamps</u>	<u>Incorrect color</u> <u>Lamp hood missing</u> <u>Cracked, broken, or missing lens</u> <u>Dust behind lens</u>
<u>Lettering and numbering</u>		<u>Missing any lettering or numbering</u> <u>Incorrect size, color, or location</u> <u>Unauthorized sign, letter, or object</u>

<u>Mirrors, cross-view</u>	<u>Missing</u> <u>Broken or loose mounting</u> <u>Broken or clouded glass</u>	
<u>Mirrors</u>	<u>Interior or exterior mirror missing</u> <u>Loose or broken mounting bracket</u> <u>Crack, break, or flaking of reflective material affixed to back of mirror glass</u> <u>Crack or break of mirror glass</u> <u>Loose or missing mounting bracket bolt or screw</u> <u>Incorrect size</u> <u>Do not meet safety standards contained in 49 CFR 571.111</u>	
<u>Miscellaneous</u>	<u>Object not secured inside the school bus</u> <u>Any item noted by the Department that could cause injury or present a danger to a passenger or school bus driver</u>	<u>Any item noted by the Department that needs to be repaired because it could interfere with the safe operation of the school bus but that is not a major defect</u>
<u>Noise suppression switch</u>	<u>Out of service</u> <u>Malfunctioning</u>	
<u>Parking brake</u>	<u>Inoperative, missing part, or not in proper adjustment</u>	
<u>Restraining barrier</u>	<u>Missing</u> <u>Incorrect size</u> <u>Loose</u>	
<u>Rub rails</u>	<u>Missing more than one</u> <u>Loose or dangling</u>	<u>Missing one</u> <u>Incorrect location</u> <u>Incorrect color</u> <u>Incorrect width</u>

<u>School bus body</u>	<u>Damage resulting in cut or rip to the exterior of school bus body</u> <u>Hole that would allow exhaust gases or dust to enter the passenger compartment</u> <u>Bolt attaching body to chassis loose, broken, or missing</u> <u>Exceeds length or width limitations</u>	<u>Absence of undercoating</u> <u>Loose or missing rivet, screw, or bolt</u>
<u>Seat belt</u>	<u>Absence of driver seat belt or inoperative driver seat belt buckle or retraction system</u> <u>Frayed seat belt material</u>	
<u>Seats</u>	<u>One or more missing</u> <u>Incorrect size or location</u> <u>Driver seat does not meet requirements for adjustment</u> <u>Loose seat cushions</u> <u>Exposed frame</u>	<u>Torn seat cushions</u>
<u>Service door</u>	<u>Incomplete closing of door assembly</u> <u>Does not contain safeguards to prevent accidental opening</u> <u>Window not made of safety glass</u> <u>Broken or cracked window panel</u> <u>Inoperative door control</u> <u>Does not open towards exterior of the school bus</u> <u>Absence of flexible material on outer edge of service door</u> <u>Absence of header pad</u>	

<p><u>Special needs school bus</u></p>	<p><u>Incorrect location or size of special-service entrance</u></p> <p><u>Incorrect size of special-service entrance door</u></p> <p><u>Window not made of safety glass</u></p> <p><u>Inoperative pressure switch</u></p> <p><u>No safety device in wheelchair lift</u></p> <p><u>No restraining barrier on wheelchair-lift platform</u></p> <p><u>Fails to provide wheelchair-securement device or anchorage</u></p> <p><u>Special-service entrance door does not open towards exterior of school bus (except Type A school bus)</u></p> <p><u>Wheelchair lift inoperable</u></p>	<p><u>Drip molding not installed above the special-service entrance</u></p> <p><u>Special-service entrance door not weather-sealed</u></p> <p><u>Incorrect color of door material or panel</u></p> <p><u>Lacks wheelchair emblem</u></p> <p><u>Missing fastening device for special-service entrance door</u></p> <p><u>Dome light missing or inoperative</u></p>
<p><u>Splash guards</u></p>		<p><u>Bottom edge of guard is more than 8 inches above the ground</u></p> <p><u>Does not cover entire width of single or dual tire</u></p> <p><u>Missing splash guard</u></p>
<p><u>Steering</u></p>	<p><u>Distance of movement not within parameters of R13-13-106(22)(c)</u></p> <p><u>Steering wheel does not move freely when turning the wheel</u></p> <p><u>Missing or cracked steering-wheel ring or bracing from center of steering wheel to steering-wheel ring</u></p> <p><u>Steering column not in a fixed position or locking mechanism missing or inoperative on adjustable steering column</u></p> <p><u>Steering column mounting bracket cracked or missing</u></p> <p><u>Loose or missing mounting bolt in steering gear housing</u></p> <p><u>Loose connecting arm on steering gear power source</u></p>	<p><u>Leakage of lubricant</u></p> <p><u>Power-steering belt cracked, frayed, or slipping</u></p> <p><u>Fluid does not fill power steering reservoir to the full level on the dipstick</u></p>

<u>Steps</u>	<u>Loose or missing grab handle in step-well</u> <u>Missing stirrup step or handle</u>	<u>Incorrect distance between steps</u> <u>Incorrect floor covering</u>
<u>Stop signal arm</u>	<u>Any stop arm inoperative</u> <u>Air leak</u> <u>If equipped with a light-emitting diode system, one or more lights missing</u> <u>Missing any stop arm</u>	<u>Incorrect lettering or color on stop signal arm</u> <u>Incorrect size of stop signal arm</u>
<u>Sun shield or visor (if required)</u>	<u>Broken, cracked, or missing</u>	<u>Not transparent</u>
<u>Suspension</u>	<u>Broken, damaged, or missing suspension part</u> <u>U-bolt loose, broken, cracked, or missing</u>	<u>Leaking shock absorber</u>

<u>Tires</u>	<u>Tires on same axle not of the same size</u> <u>Combination of bias and radial tires</u> <u>Tires vary more than one size between axles</u> <u>Tires not correct size for gross vehicle weight rating of school bus</u> <u>Single rear tire on school bus with gross vehicle weight rating of more than 10,000 pounds</u> <u>Regrooved, recapped, or retreaded tire mounted on a front wheel</u> <u>Tread groove depth less than 4/32 of an inch, measured in a tread groove on a tire on a front wheel</u> <u>Tire is mounted or inflated so it comes in contact with any part of the school bus or other tire</u> <u>Tread groove depth less than 2/32 of an inch, measured in a tread groove on a tire on a rear wheel</u> <u>Bump, knot, or bulge present on any tire</u> <u>Sidewall is cut, worn, or damaged to the extent that ply cord is exposed</u> <u>Separation of tread from tire casing</u> <u>Exposed ply or belting on any tire</u> <u>Flat tire or audible leak from a tire on any wheel</u> <u>If present, spare tire on Type C or D school bus not mounted outside passenger compartment</u>	
<u>Ventilation</u>	<u>Non-closing exhaust ventilator missing</u>	
<u>Wheel housing</u>	<u>Incorrect size or construction of wheel housing or opening</u>	

<u>Wheels</u>	<u>Not correct size for gross vehicle weight rating of school bus</u> <u>Loose or missing lug nut</u> <u>Broken stud bolt</u> <u>Crack or welded repair in wheel assembly</u>	<u>Not painted black</u>
<u>Windows</u>	<u>Not of safety glass</u> <u>Opening too small</u> <u>Cracked or broken</u> <u>Placement of non-transparent material</u> <u>Inoperative latch</u>	
<u>Windshield</u>	<u>Placement of non-transparent material</u> <u>Crack, chip, or pitting that interferes with the school bus driver's vision</u>	<u>Crack, chip or pitting that does not interfere with the school bus driver's vision</u>
<u>Windshield washer system</u>	<u>Missing</u>	<u>Low or no cleaning solution</u>
<u>Windshield wipers</u>	<u>Inoperative or missing wiper on school bus driver's side</u> <u>Inoperative or missing wiper on side opposite the school bus driver</u>	<u>Inoperative speed control</u> <u>Split or hardened wiper blade</u>
<u>Wiring</u>	<u>Incorrect color or number coding</u> <u>Wiring circuit not protected by fuse or circuit breaker</u> <u>One or more non-metal grommets missing</u> <u>Electrical wires outside the school bus body improperly secured</u>	

C. A school bus shall be inspected annually, according to a schedule established by the Department and the standards contained in subsections (A) and (B) and this section.

1. If the Department finds a major defect, the Department shall remove the current safety inspection decal and replace with a new safety inspection decal only after the major defect is repaired.
2. If the Department finds a minor defect, the Department shall remove the current safety inspection decal and replace with a new safety inspection decal and allow the school bus owner to make repairs in accordance with the provisions at

R13-13-108(A)(4) through (A)(7).

D. A school bus driver shall perform the following operations checks and tasks on the school bus:

1. Before a school bus is operated for the first time each day, conduct a pre-trip operations check of the school bus to determine that the following are operational and are not damaged:
 - a. All lamps, including alternately flashing, back-up, clearance, hazard, head, identification, interior, side marker, stop, tail, turn signal, and strobe lamps, if any, and emergency warning devices;
 - b. Tires, wheels, and wheel fasteners;
 - c. Service door;
 - d. Steps and step wells;
 - e. Emergency exits and signals;
 - f. Emergency doors and signals;
 - g. Wheelchair lift and wheelchair lift dome lamp;
 - h. Wheelchair-securement devices;
 - i. Wheelchair-securement anchorages;
 - j. Special-service entrance door;
 - k. Special-service entrance door signal;
 - l. Windows;
 - m. Windshield;
 - n. Windshield wipers;
 - o. Instrument panel and gauges;
 - p. Service brakes;
 - q. Service brake warning devices;
 - r. Parking brake;
 - s. Bumpers;
 - t. Seats and seat frames;
 - u. Floor coverings;
 - v. School bus body;
 - w. Engine fluid levels;
 - x. Engine compartment steering components;
 - y. Stop arm;
 - z. Horn;
 - aa. Mirrors;
 - bb. Engine fluid gauges;
 - cc. Noise suppression switch;
 - dd. Child alert notification system, if installed;
 - ee. Crossing control arm, if installed; and
 - ff. Air conditioning system, if installed.
2. Each time a pre-trip operations check of a school bus is conducted, check all emergency equipment to determine that the emergency equipment complies with the standards at R13-13-107(11) and R13-13-110.
3. Each time a school bus is operated subsequent to the first time the school bus is operated each day, conduct a walk-around operations check to determine whether

- there is an obvious engine fluid leak and the following are operational and are not damaged:
- a. All lamps listed in subsection (D)(1)(a);
 - b. Tires, wheels, and wheel fasteners;
 - c. Bumpers;
 - d. School bus body;
 - e. Windows;
 - f. Stop arm; and
 - g. Windshield.
4. Once daily, sweep and clean the interior of the school bus.
 5. After completing each operations check, the school bus driver shall complete the portions of a written monthly operations check report that provide the following information:
 - a. Date and time of the operations check;
 - b. Name of the school bus driver conducting the operations check;
 - c. Name of the employer;
 - d. Number assigned to the school bus by the school bus owner and painted on the outside of the school bus body; and
 - e. Indication of whether an item is operational, inoperative, or damaged.
 6. A school bus driver who performs an operations check and finds any item listed in subsections (D)(1) through (D)(3) inoperative or damaged shall immediately complete and submit a written repair order to the school bus owner through the employer.
 - a. The school bus owner shall use the standards contained in subsection (B) to determine whether an item reported on a repair order as inoperative or damaged is a major or minor defect.
 - b. If the school bus owner finds that a major defect exists, the school bus owner shall place the school bus out of service until the major defect is repaired.
 - c. If the school bus owner finds that a minor defect exists, the school bus may be used to transport passengers, but the school bus owner shall repair the defect in accordance with the provisions at R13-13-108(A)(4) through(A)(7). Time in which to make the minor repair shall be calculated from the date of the written repair order.
 7. After a school bus makes its final trip on the last day the school bus is driven in a particular month the school bus driver operating the school bus shall submit the written monthly operations check report to the school bus owner through the employer.
- E. In addition to the operations checks described in subsection (D), a school bus owner shall systematically inspect, repair, and maintain, or cause to be systematically inspected, repaired, and maintained, all parts of a school bus chassis and body described in Sections R13-13-106 and R13-13-107 and any other parts and accessories that may affect safe operation of the school bus. The school bus owner shall ensure that the maintenance of a school bus and repair of major defects is done by:
1. An ASE-certified technician,

2. An individual working under the supervision of an ASE-certified master school bus technician,
3. An individual with at least one year of participation in a school bus manufacturer-sponsored or commercial vehicle maintenance training program, or
4. An individual with at least one year of experience as a school bus mechanic.

F. Records

1. A school bus owner shall maintain the following records in a separate file for each school bus for as long as the school bus is in operation in Arizona:
 - a. Number assigned to the school bus by the school bus owner,
 - b. Name of the school bus body manufacturer,
 - c. Name of the school bus chassis manufacturer,
 - d. Identification number of the school bus located in the driver's compartment,
 - e. Year the school bus body was assembled upon the school bus chassis, and
 - f. Size of the tires placed on the school bus.
2. A school bus owner shall maintain all records of initial inspection, subsequent inspections, and repairs and maintenance procedures performed on the school bus for three years from the date of inspection, repair, or maintenance. The school bus owner shall ensure that all records of repairs and maintenance procedures include verification from the owner of the business responsible for the repairs and maintenance procedures that the individual who actually performs the repairs and maintenance procedures is qualified under subsection (E).
3. If a school bus is sold, the school bus owner shall transfer the records required by subsections (F)(1) and (F)(2) to the purchaser.
4. A school bus owner shall maintain monthly operations check reports for three months from the date of the report.

G. Alterations

1. Before a school bus owner alters a school bus, the school bus owner shall submit a request in writing to the Department describing the proposed alteration and the reason for the proposal.
2. Within 60 days of receiving a request for alteration, the Department shall inform the school bus owner in writing whether the request has been approved or denied. The Department shall base its decision to approve or deny on an assessment of whether the proposed alteration affects the operations of a school bus, complies with the statutes and rules applicable to school buses, or affects the health, safety, or welfare of any individual.

R13-13-109. Time-frames for Making Certification Determinations

- A.** For certification as a school bus driver, the time-frames required by A.R.S. § 41-1072 et seq. are:
1. Overall time-frame: 60 days
 2. Administrative completeness review time-frame: 45 days
 3. Substantive review time-frame: 15 days
- B.** An administratively complete application for certification as a school bus driver consists of all the information and documents listed in R13-13-102(A).
- C.** An administrative completeness review time-frame, as described in A.R.S. § 41-1072(1) and listed in subsection (A)(2), begins on the date the Department receives an application.
1. If the application is not administratively complete when received, the Department shall send a notice of deficiency to the applicant. The deficiency notice shall state the documents and information needed to complete the application.
 2. Within 120 days from the postmark date of the deficiency notice, the applicant shall submit to the Department the missing documents and information. The time-frame for the Department to finish the administrative completeness review is suspended from the postmark date of the deficiency notice until the date the Department receives the missing documents and information.
 3. If the applicant fails to provide the missing documents and information within the time provided, the Department shall close the applicant's file. An applicant whose file is closed and who wants to be certified shall apply again under R13-13-102.
 4. If the application is administratively complete, the Department shall send a written notice of administrative completeness to the applicant.
- D.** A substantive review time-frame, as described in A.R.S. § 41-1072(3) and listed in subsection (A)(3), begins on the postmark date of the notice of administrative completeness.
1. During the substantive review time-frame, the Department may make one comprehensive written request for additional information.
 2. The applicant shall submit to the Department the additional information identified in the request for additional information within 20 days from the postmark date of the request for additional information. The time-frame for the Department to finish the substantive review of the application is suspended from the postmark date of the request for additional information until the Department receives the additional information.
 3. Unless an applicant requests that the Department deny certification within the 20-day period in subsection (D)(2), the Department shall close the file of an applicant who fails to submit the additional information within the 20 days provided. An applicant whose file is closed and who wants to be certified shall apply again under R13-13-102.
 4. When the substantive review is complete, the Department shall inform the applicant in writing of its decision whether to certify the applicant.
 - a. The Department shall deny certification if it determines that the applicant

does not meet all substantive criteria for certification required by statute and rule. An applicant who is denied certification may appeal the Department's decision under A.R.S. § 41-1092 et seq. and any rules made under A.R.S. § 41-1092.01(C)(4).

- b. The Department shall grant certification if it determines that the applicant meets all substantive criteria for certification required by statute and rule.

R13-13-110. First-aid Equipment

No later than 180 days after the effective date of these rules, a school bus in Arizona shall meet the requirements of this Section.

1. First-aid and body-fluid cleanup kits shall be mounted in a school bus in accordance with R13-13-107(11)(a).
2. First-aid kit: A school bus shall be equipped with a removable first-aid kit that has a weatherproofing seal around the lid to prevent moisture or dust from entering the first-aid kit, is clearly labeled as a first-aid kit, and contains the following:
 - a. Two - 1 inch x 2 1/2 inch yards adhesive tape rolls,
 - b. 24 - Sterile gauze pads 3 inches x 3 inches,
 - c. Eight - 2 inch adhesive bandages,
 - d. 10 - 3 inch adhesive bandages,
 - e. Two - 2 inch x 6 inch sterile gauze roller bandages,
 - f. Four - Triangular bandages approximately 40 inches x 36 inches x 54 inches with two safety pins,
 - g. Three - Sterile gauze pads at least 24 inches x 24 inches,
 - h. Three - Sterile eye pads,
 - i. One - Rounded-end scissors,
 - j. One - Pair of non-latex gloves, and
 - k. One - Mouth-to-mouth airway.
3. Body fluid or bloodborne-pathogen cleanup kit: A school bus shall be equipped with a removable body-fluid or bloodborne-pathogen cleanup kit that is sealed, clearly labeled as a body-fluid or bloodborne-pathogen cleanup kit, and contains the following:
 - a. One - Pouch of solidifier with chlorine,
 - b. One - Pick-up scoop with scraper,
 - c. One - Pair of non-latex gloves,
 - d. Two - Disinfectant hand wipes (antimicrobial),
 - e. Two - Plastic disposal bags with ties (biohazard),
 - f. Two - Germicidal towelettes effective against human immunodeficiency virus and tuberculosis,
 - g. Two - Paper crepe towels, and
 - h. One - Easy to follow instructions.

**ARTICLE 2. MINIMUM STANDARDS FOR SCHOOL BUSES OPERATED ON
ALTERNATIVE FUEL**

R13-13-201. Minimum Standards for Compressed Natural Gas Fuel Systems

A. In addition to the definitions in R13-13-101, in this Article, unless otherwise specified:

“AGA” means the American Gas Association.

“ANSI” means the American National Standards Institute.

“Angle of departure” means the area above an imaginary line that extends from the bottom outside edge of the rear bumper on a vehicle to the point at which a tire on the vehicle's rear drive axle touches the ground.

“Appurtenance” means an item connected to an opening of a natural-gas pressure vessel to make the natural-gas pressure vessel gas-tight. This includes pressure relief devices, shutoff, backflow, excess-flow, and internal valves, liquid-level and pressure gauges, and plugs.

“Approved” means acceptable to the Department.

“ASE” means National Institute of Automotive Service Excellence.

“Bracket” means rubber-lined, hoop and cradle mounting hardware supplied or approved by a pressure-vessel manufacturer to hold a natural-gas pressure vessel in a rack.

“CNG” means compressed natural gas, a combustible mixture of hydro-carbon gases and vapors, principally methane, that is reduced in volume by pressure for use as a vehicular fuel.

“Fuel-distribution assembly” means a device that regulates the flow of fuel from a natural-gas pressure vessel to a vehicle engine.

“Fuel line” means a pipe, tubing, or hose, and all related fittings through which natural gas passes on a vehicle.

“Installer” means a person who converts a school bus from the use of gasoline to the use of CNG by attaching a natural-gas fuel system to the school bus after the school bus is manufactured.

“Listed” means included in a publication of an approved organization that is concerned with product evaluation, conducts periodic inspection of equipment or material, and includes equipment or material in the approved organization's publication only if the equipment or material complies with appropriate standards or performs in a specified manner.

“NFPA” means the National Fire Protection Association, which is located at 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, and which is accessible at (617) 770-3000 and www.nfpa.org.

“NGV-1” means specific standards set by the American National Standards Institute

and American Gas Association for the refueling connection device of a natural-gas vehicle.

“NGV-2” means specific standards set by the American National Standards Institute and American Gas Association for a vehicle-on-board natural-gas pressure vessel.

“Natural gas” means a combustible mixture of hydrocarbon gases and vapors, principally methane.

“Natural-gas fuel system” means a group of items including a pressure vessel and all attached valves, piping, and appurtenances that form a network for distributing natural gas to a vehicle engine.

“Operating pressure” means the internal force that a manufacturer intends for a natural-gas pressure vessel to achieve during normal operation of the vehicle to which the natural-gas pressure vessel is attached.

“Out-of-service” means not compliant with these rules, NFPA 52, or manufacturer's instructions for installation, maintenance, or repair.

“Owner” means a private business, school, or school district that owns a school bus.

“PSI” means pound per square inch.

“Pressure-relief device” means a mechanism that is installed in a natural-gas pressure vessel or integrated with a valve, that is operated by temperature, pressure, or both, and that releases the CNG in the natural-gas pressure vessel in specific emergency conditions. A pressure-relief device for a U.S. Department of Transportation or Canada Transport natural-gas pressure vessel also includes a mechanism capable of protecting a partially charged natural-gas pressure vessel.

“Pressure vessel” means a cylinder that is part of a natural-gas fuel system and that is constructed, inspected, and maintained in accordance with U.S. Department of Transportation or Canada Transport regulations or ANSI/AGA NGV2, Basic Requirements for Compressed Natural Gas Vehicle (CNGV) Fuel Containers, or CSA B51, Boiler, Pressure Vessel and Pressure Piping Code.

“Pressure-vessel valve” means a mechanical device connected directly to a natural-gas pressure vessel opening that regulates the flow of CNG from the natural-gas pressure vessel to the vehicle engine.

“Rack” means a metal structure that surrounds a natural-gas pressure vessel mounted on a vehicle and is secured to the vehicle frame by a method capable of withstanding a static up, down, left, right, forward, or backward force of eight times the weight of the fully pressurized natural-gas pressure vessel.

“UL” means the Underwriters' Laboratory, Inc.

B. Applicability and enforcement date of this Section

1. This Section applies to school buses that are manufactured to use only gasoline or diesel fuel and are converted to use CNG, in whole or in part.
2. The Department shall enforce this Section beginning 180 days after it is filed with the Office of the Secretary of State. After the beginning enforcement date, a

- school bus that is manufactured to use only gasoline or diesel fuel and is converted to use CNG, in whole or in part, shall meet the requirements of this Section when the school bus is introduced into Arizona or when the school bus is converted to natural-gas power. A school bus introduced into Arizona and powered in whole or in part by CNG before the beginning enforcement date of this Section shall meet the requirements of this Section or those at A.A.C. R17-4-611.
3. After the beginning enforcement date of this Section, the Department shall not approve a school bus manufactured to use only gasoline or diesel fuel and converted to use CNG, in whole or in part, unless the natural-gas fuel system meets the requirements of this Section.

C. Insurance

1. An owner shall not contract with an installer unless the installer has insurance coverage provided by a comprehensive general liability broad form insurance policy that is approved by the Department. The insurance policy shall include coverage for liability resulting from:
 - a. Completed installation operations,
 - b. Harm that arises on the installer's premises, and
 - c. Breach of contract by the installer.
2. In addition to the liability coverage described in subsection (C)(1), an owner shall ensure that either:
 - a. The installer has insurance coverage for liability resulting from harm that arises from subcontracted work performed by an independent contractor, or
 - b. An independent contractor who performs work for the installer under an agreement has an insurance policy that provides coverage for liability resulting from harm caused by the independent contractor's work.
3. An owner shall not contract with an installer unless the installer has an insurance policy that provides at least \$1 million liability coverage per occurrence both for bodily injury and for property damage.
4. An owner shall not contract with an installer unless the issuer of the installer's insurance policies described in subsections (C)(1) through (C)(3) names the Department as an additional insured on each policy and keeps the Department informed of any change in the status of each policy.
5. An owner shall obtain the Department's approval of the installer's insurance policy by submitting proof of the insurance described in subsections (C)(1) through (C)(3) to the Department before entering a contractual agreement with the installer for the installation of a natural-gas fuel system on a school bus.
6. If an owner acts as an installer, the owner shall maintain the insurance required by this Section.
7. The Department shall approve an installer's insurance policy, proof of which is submitted by an owner in accordance with subsection (C)(5), if the policy conforms to the requirements in subsections (C)(1) through (C)(3). The Department shall send written notice of its decision to approve or disapprove the installer's insurance policy to the owner within 15 days from receipt of the proof of insurance.

D. General requirements for installing a natural-gas fuel system

1. Converting a school bus to use of CNG, whether in whole or in part, is not an alteration as defined in R13-13-101.
2. Unless specifically provided otherwise in this Section, when installing a natural-gas fuel system, an installer shall use parts and equipment and perform work in a manner that meets or exceeds the standards of NFPA 52, Standard for Compressed Natural Gas (CNG) Vehicular Fuel Systems, 1995 (and no later editions or amendments), Quincy, MA, which is incorporated by this reference and on file with the Department and the Office of the Secretary of State.
3. An installer shall use only UL-listed or AGA-approved carburetor equipment when installing a natural-gas fuel system on a school bus.
4. An installer shall meet or exceed the recommended guidelines provided by the manufacturers of all parts of a natural-gas fuel system when installing the natural-gas fuel system on a school bus.
5. An installer shall ensure that installation of a natural-gas fuel system on a school bus is performed by an individual who has proof of training provided by the manufacturer of the natural-gas fuel system or ASE alternative fuels certification.
6. If a school bus is converted from the use of gasoline or diesel fuel to the dedicated use of CNG, the installer shall remove the gasoline or diesel-fuel tank and accompanying gasoline or diesel-fuel system parts from the school bus.

E. Natural-gas pressure vessel: An installer shall use only a natural-gas pressure vessel that is certified by its manufacturer as meeting or exceeding the NGV2 standards and as being U.S. Department of Transportation or ANSI listed. An installer shall use the natural-gas pressure vessel manufacturer's recommended bracket.

F. Installing a natural-gas pressure vessel

1. An installer shall securely attach a rack to the frame of a school bus in the following manner:
 - a. By drilling no holes in the school bus frame that exceed the manufacturer's requirements; and
 - b. By using no welding on and applying no heat to the school bus frame.
2. When installing a natural-gas fuel system on a school bus, an installer shall locate the natural-gas pressure vessel and its appurtenances on the vehicle frame as follows:
 - a. Below the driver's or passengers' compartment;
 - b. So no part protrudes:
 - i. In front of the front axle,
 - ii. Beyond the outside face of the rear bumper, or
 - iii. Beyond the sides of the school bus;
 - c. Inside a rack; and
 - d. So the minimum clearance between the road and the lowest part of the natural-gas pressure vessel and its rack on a school bus loaded to its gross vehicle weight rating, is:
 - i. No fewer than 7 inches (17.5 mm) for a school bus with a wheel base fewer than or equal to 127 inches (323 mm); or
 - ii. No fewer than 9 inches (22.5 mm) for a school bus with a wheel base

greater than 127 inches (323 mm).

3. If the natural-gas pressure vessel and its appurtenances are located behind the rear axle of the school bus, in addition to the requirements in subsection (F)(3), an installer shall locate the natural-gas pressure vessel as follows:
 - a. Below the floor line, and
 - b. Above the school bus' angle of departure.

G. Protecting a natural-gas pressure vessel. To protect a natural-gas pressure vessel and its appurtenances from damage, an installer shall:

1. Surround the natural-gas pressure vessel with a stone guard on all sides that are not protected by the natural barriers of the vehicle. The stone guard shall not be attached to the natural-gas pressure vessel. If the stone guard protects a valve, it shall be made of at least 16-gauge steel. If the stone guard does not protect a valve, it shall be made of at least 3/16-in. mesh with openings no greater than 1 in.;
2. Place a resilient, non-absorbent gasket between the natural-gas pressure vessel and its brackets in a manner that prevents the brackets from directly contacting the natural-gas pressure vessel;
3. Ensure that the weight of the natural-gas pressure vessel is not supported, in whole or in part, by an appurtenance; and
4. Place a shield between, but not attached to, the natural-gas pressure vessel and the vehicle exhaust system if the natural-gas pressure vessel or the fuel lines are located fewer than 8 inches from the exhaust system. The shield shall be constructed of at least 18-gauge metal.

H. Safety and check valves: An installer shall equip a natural-gas fuel system with:

1. Either an automatic fuel supply shut-off valve that is placed between the pressure vessel fuel-pressure regulator and the fuel distribution assembly and activated by engine vacuum or oil pressure, or an electronic fuel injector; and
2. Either a manual or automatically controlled shut-off valve that enables the natural-gas pressure vessel to be isolated from the remainder of the natural-gas fuel system. If a manual shut-off valve is used, it shall:
 - a. Have no more than 90° rotation from the opened to the closed position;
 - b. Have a red valve handle;
 - c. Be placed in an accessible location; and
 - d. Have "ESV" printed on the school bus at the access location to the manual shut-off valve, in 2-in. to 4-in., unshaded, red letters.

I. Installation of fuel lines. An installer shall:

1. Use fuel lines constructed of seamless stainless steel that has been tested and certified by the manufacturer to an operating pressure of 3600 PSI with a 4:1 safety factor;
2. Mount and brace fuel lines to the vehicle frame in a manner that minimizes vibration;
3. Secure fuel lines to the vehicle frame at least every 24 inches with rubber-lined fasteners;
4. Protect fuel lines that pass through any structural member with rubber grommets, bulkhead fittings, or both;

- 5. Cause fuel lines that run to the engine to follow the main frame channel; and
- 6. Install an access door that is at least 70 square inches if access to the fill receptacle and fuel pressure gauge is through the school bus body. The words "CNG Fill" shall be printed on the school bus body, immediately above the access door, in 2-in. to 4-in., unshaded letters.
- J.** Installation of Venting System. An installer shall ensure that in addition to meeting the requirements in NFPA 52, all vent exits are aimed toward the ground.

R13-13-202. Inspection and Maintenance of Compressed Natural Gas Fuel Systems

- A.** This Section applies to all school buses that are powered, in whole or in part, by CNG and are introduced into Arizona after the beginning enforcement date of these rules.
- B.** An owner shall not use a school bus equipped with a natural-gas fuel system to transport passengers until the natural-gas fuel system is inspected and approved by the Department. An owner shall notify the Department when the owner obtains a school bus that needs to be inspected for compliance with these rules.
- C.** After the initial inspection conducted by the Department, an owner shall ensure that a school bus equipped with a natural-gas fuel system is inspected annually and under the following special circumstances:
1. When the school bus is involved in an accident;
 2. When the natural-gas pressure vessel may have been damaged;
 3. When natural gas is smelled;
 4. When there is an unexpected loss of gas pressure, rattling, or other indication of looseness; or
 5. When the natural-gas pressure vessel is changed.
- D.** An owner shall ensure that an annual or special-circumstances inspection is conducted by the Department or an individual who has proof of training provided by the manufacturer of the natural-gas fuel system or ASE alternative-fuel certification.
- E.** An owner shall ensure that every inspection of a school bus equipped with a natural-gas fuel system assesses whether the natural-gas fuel system meets the safety standards in 13 A.A.C. 13, and NFPA 52. This assessment shall include:
1. Leak-testing the natural-gas fuel system in compliance with NFPA 52 guidelines;
 2. Verifying that the pressure vessel is designed for storage of CNG;
 3. Verifying that the service life of the natural-gas pressure vessel has not expired;
 4. Verifying that the natural-gas pressure vessel is certified by its manufacturer as meeting or exceeding the NGV2 standards and as being U.S. Department of Transportation or ANSI listed;
 5. Verifying that all parts of the natural-gas fuel system are properly listed or approved; and
 6. Verifying that all parts of the natural-gas fuel system are installed in accordance with the manufacturer's instructions.
- F.** An owner shall ensure that an individual who conducts an inspection of a school bus equipped with a natural-gas fuel system completes a Compressed Natural Gas Safety Inspection Form, which is available from the Department, and certifies that the school bus meets all safety standards in 13 A.A.C. 13, and NFPA 52.
- G.** If it is necessary to condemn a natural-gas pressure vessel, the owner shall:
1. Return the condemned natural-gas pressure vessel to its manufacturer; and
 2. Obtain a certificate from the manufacturer that states ownership of the natural-gas pressure vessel is transferred from the owner to the manufacturer.
- H.** An owner shall maintain each completed Compressed Natural Gas Safety Inspection Form in a separate file for each school bus for the service life of the school bus. If a school bus is transferred from one owner to another, the first owner shall transfer the

completed inspection forms to the second owner.

- I. An owner shall make the inspection forms maintained under subsection (H) available for review by the Department.

VIEW DOCUMENT

28-3228. School bus drivers; requirements; rules; cancellation

A. A person shall not operate a school bus transporting school children unless the person possesses the appropriate license class for the size of school bus being operated that is issued by the department of transportation, a bus endorsement that is issued by the department of transportation and a school bus certificate that is issued by the department of public safety.

B. To be certified as a school bus driver a person shall do both of the following:

1. Meet and maintain the minimum standards prescribed by this section and rules adopted by the department of public safety in consultation with the school bus advisory council established by section 28-3053.

2. Complete an initial instructional course on school bus driver safety and training including behind the wheel training.

C. The department of public safety in consultation with the school bus advisory council established by section 28-3053 shall adopt rules that establish minimum standards for the certification of school bus drivers. In cooperation with local school districts, the department of public safety shall provide for school bus driver safety and training courses. The standards established shall:

1. Include requirements concerning moral character, knowledge of school bus operation, pupil and motor vehicle safety, physical impairments that might affect the applicant's ability to safely operate a school bus or that might endanger the health or safety of school bus passengers, knowledge of first aid, establishment of school bus safety and training courses, a refresher course to be completed on at least a biennial basis and other matters as the department of public safety and the school bus advisory council established by section 28-3053 prescribe for the protection of the public.

2. Require tests to detect the presence of alcohol or the use of a drug in violation of title 13, chapter 34 that may adversely affect the ability of the applicant to safely operate a school bus.

3. Authorize the performance of hearing tests with or without the use of a hearing aid as provided in 49 Code of Federal Regulations section 391.41.

D. Each person who applies for a school bus driver certificate shall have a valid fingerprint clearance card that is issued pursuant to title 41, chapter 12, article 3.1 and shall submit an identity verified fingerprint card as described in section 15-106 that the department of public safety shall use to process the fingerprint clearance card as outlined in section 15-106.

E. A person who is issued a school bus driver certificate shall maintain a valid identity verified fingerprint clearance card for the duration of any school bus driver certification period.

F. The department of public safety shall suspend a school bus driver certificate if the fingerprint clearance card is invalid, suspended, canceled or revoked.

G. The department of public safety shall issue a school bus driver certificate to an applicant who meets the requirements of this

section. The certificate is valid if the applicant maintains the minimum standards established by this section.

H. The department of public safety may cancel the certificate if the person's license to drive is suspended, canceled, revoked or disqualified. The department of public safety shall cancel the certificate if the person fails to maintain the minimum standards established pursuant to this section. A person whose application for a certificate is refused or whose certificate is canceled for failure to meet or maintain the minimum standards may request and receive a hearing from the department of public safety.

I. The department of public safety shall enforce the rules adopted pursuant to this section.

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41-1713. Powers and duties of director; authentication of records

A. The director of the department shall:

1. Be the administrative head of the department.
2. Subject to the merit system rules, appoint, suspend, demote, promote or dismiss all other classified employees of the department on the recommendation of their respective division superintendent. The director shall determine and furnish the law enforcement merit system council established by section 41-1830.11 with a table of organization. The superintendent of each division shall serve at the concurrent pleasure of the director and the governor.
3. Except as provided in sections 12-119, 41-1304 and 41-1304.05, employ officers and other personnel as the director deems necessary for the protection and security of the state buildings and grounds in the governmental mall described in section 41-1362, state office buildings in Tucson and persons who are on any of those properties. Department officers may make arrests and issue citations for crimes or traffic offenses and for any violation of a rule adopted under section 41-796. For the purposes of this paragraph, security does not mean security services related to building operation and maintenance functions provided by the department of administration.
4. Make rules necessary for the operation of the department.
5. Annually submit a report of the work of the department to the governor and the legislature, or more often if requested by the governor or the legislature.
6. Appoint a deputy director with the approval of the governor.
7. Adopt an official seal that contains the words "department of public safety" encircling the seal of this state as part of its design.
8. Investigate, on receipt, credible evidence that a licensee or registrant has been arrested for, charged with or convicted of an offense that would preclude the person from holding a license or registration certificate issued pursuant to title 32, chapter 26.
9. Cooperate with the Arizona-Mexico commission in the governor's office and with researchers at universities in this state to collect data and conduct projects in the United States and Mexico on issues that are within the scope of the department's duties and that relate to quality of life, trade and economic development in this state in a manner that will help the Arizona-Mexico commission to assess and enhance the economic competitiveness of this state and of the Arizona-Mexico region.
10. Adopt and administer the breath, blood or other bodily substances test rules pursuant to title 28, chapter 4.
11. Develop procedures to exchange information with the department of transportation for any purpose related to sections 28-1324, 28-1325, 28-1326, 28-1462 and 28-3318.
12. Collaborate with the state forester in presentations to legislative committees on issues associated with wildfire prevention, suppression and emergency management as provided by section 37-1302, subsection B.

B. The director may:

1. Issue commissions to officers of the department.
2. Request the cooperation of the utilities, communication media and public and private agencies and any sheriff or other peace officer in any county or municipality, within the limits of their respective jurisdictions when necessary, to aid and assist in the performance of any duty imposed by this chapter.

3. Cooperate with any public or private agency or person to receive or give necessary assistance and may contract for such assistance subject to legislative appropriation controls.
4. Utilize the advice of the board and cooperate with sheriffs, local police and peace officers within the state for the prevention and discovery of crimes, the apprehension of criminals and the promotion of public safety.
5. Acquire in the name of the state, either in fee or lesser estate or interest, all real or any personal property that the director considers necessary for the department's use, by purchase, donation, dedication, exchange or other lawful means. All acquisitions of personal property pursuant to this paragraph shall be made as prescribed in chapter 23 of this title unless otherwise provided by law.
6. Dispose of any property, real or personal, or any right, title or interest in the property, when the director determines that the property is no longer needed or necessary for the department's use. Disposition of personal property shall be as prescribed in chapter 23 of this title. The real property shall be sold by public auction or competitive bidding after notice published in a daily newspaper of general circulation, not less than three times, two weeks before the sale and subject to the approval of the director of the department of administration. When real property is sold, it shall not be sold for less than the appraised value as established by a competent real estate appraiser. Any monies derived from the disposal of real or personal property shall be deposited, pursuant to sections 35-146 and 35-147, in the Arizona highway patrol fund as authorized by section 41-1752, subsection B, paragraph 6.
7. Sell, lend or lease personal property directly to any state, county or local law enforcement agency. Personal property may be sold or leased at a predetermined price without competitive bidding. Any state, county or local law enforcement agency receiving personal property may not resell or lease the property to any person or organization except for educational purposes.
8. Dispose of surplus property by transferring the property to the department of administration for disposition to another state budget unit or political subdivision if the state budget unit or political subdivision is not a law enforcement agency.
9. Lease or rent personal property directly to any state law enforcement officer for the purpose of traffic safety, traffic control or other law enforcement related activity.
10. Sell for one dollar, without public bidding, the department issued handgun or shotgun to a department officer on duty related retirement pursuant to title 38, chapter 5, article 4. Any monies derived from the sale of the handgun or shotgun to the retiring department officer shall be deposited, pursuant to sections 35-146 and 35-147, in the Arizona highway patrol fund as authorized by section 41-1752, subsection B, paragraph 6.
11. Conduct state criminal history records checks for the purpose of updating and verifying the status of current licensees or registrants who have a license or certificate issued pursuant to title 32, chapter 26. The director shall investigate, on receipt, credible evidence that a licensee or registrant has been arrested for, charged with or convicted of an offense that would preclude the person from holding a registration certificate issued pursuant to title 32, chapter 26.
12. Grant a maximum of two thousand eighty hours of industrial injury leave to any sworn department employee who is injured in the course of the employee's duty, any civilian department employee who is injured in the course of performing or assisting in law enforcement or hazardous duties or any civilian department employee who was injured as a sworn department employee rehired after August 9, 2001 and would have been eligible pursuant to this paragraph and whose work-related injury prevents the employee from performing the normal duties of that employee's classification. This industrial injury leave is in addition to any vacation or sick leave earned or granted to the employee and does not affect the employee's eligibility for any other benefits, including workers' compensation. The employee is not eligible for payment pursuant to section 38-615 of industrial injury leave that is granted pursuant to this paragraph. Subject to approval by the law enforcement merit system council, the director shall adopt rules and procedures regarding industrial injury leave hours granted pursuant to this paragraph.

13. Sell at current replacement cost, without public bidding, the department issued badge of authority to an officer of the department on the officer's promotion or separation from the department. Any monies derived from the sale of the badge to an officer shall be deposited, pursuant to sections 35-146 and 35-147, in the department of public safety administration fund to offset replacement costs.

C. The director and any employees of the department that the director designates in writing may use the seal adopted pursuant to subsection A, paragraph 7 of this section to fully authenticate any department records and copies of these records. These authenticated records or authenticated copies of records shall be judicially noticed and shall be received in evidence by the courts of this state without any further proof of their authenticity.

INDUSTRIAL COMMISSION

Title 20, Chapter 5, Article 1, Workers' Compensation Practice and Procedure; Article 13,
Treatment Guidelines

Amend: R20-5-106; R20-5-1301; R20-5-1302; R20-5-1303; R20-5-1309; R20-5-1310;
R20-5-1311

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - REGULAR RULEMAKING

MEETING DATE: July 10, 2018

AGENDA ITEM: E-4

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: INDUSTRIAL COMMISSION (R-18-0704)
Title 20, Chapter 5, Article 1, Workers' Compensation Practice and Procedure;
Article 13, Treatment Guidelines

Amend: R20-5-106; R20-5-1301; R20-5-1302; R20-5-1303; R20-5-1309;
R20-5-1310; R20-5-1311

This rulemaking, from the Industrial Commission of Arizona (Commission), seeks to amend seven rules in A.A.C. Title 20, Chapter 5 related to treatment guidelines. The rules in Article 13 were promulgated in response to 2012 legislation requiring the Commission to “develop and implement a process for the use of evidence-based treatment guidelines, where appropriate, to treat injured workers.” See A.R.S. § 23-1062.03. The Commission adopted the Work Loss Data Institute's *Official Disability Guidelines – Treatment in Workers Compensation (Official Disability Guidelines)* as the standard reference for evidence-based medicine while limiting applicability of the *Official Disability Guidelines* to the management of chronic pain and the use of opioids for all stages of pain management.

The 2017 legislation required the Commission to review, by December 31, 2017, options for streamlining the authorization process within the treatment guidelines. At its December 14, 2017 public meeting, the Commission voted to develop and mandate the use of a Medical Treatment Preauthorization Form with accompanying instructions, and to reduce the time period within which a payer must respond to requests for preauthorization or reconsideration from ten business days to seven business days. At its December 21, 2017 public meeting, the Commission took formal action to modify the applicability of the *Official Disability Guidelines* to all body parts and conditions as of October 1, 2018.

The Governor's Office provided an exception from the rulemaking moratorium on February 13, 2018.

Proposed Action

- Section 106 - **Commission Forms:** Amendments describe and mandate the use of the Medical Treatment Preauthorization Form.
- Section 1301 - **Adoption and Applicability of the Article:** Amendments reflect the Commission's decision to make the *Official Disability Guidelines* applicable to all body parts and conditions.
- Section 1302 - **Definitions:** Definitions are modified to reflect changes to other rules in Article 13.
- Section 1303 - **Provider Request for Preauthorization:** Subsection (B) is modified to mandate the use of the Medical Treatment Preauthorization Form.
- Section 1309 - **Payer Decision on Request for Preauthorization:** Amendments require a payer who receives a deficient request for preauthorization to, within seven business days of receiving and identifying the deficient request, either: (1) act on the deficient request by using the Medical Treatment Preauthorization Form; or (2) notify the provider making the request that a request for preauthorization must be submitted on the Medical Treatment Preauthorization Form.
- Section 1310 - **Payer Reconsideration on Request for Preauthorization:** In addition to clarifying changes, subsection (E), which provides requirements for a payer's written decision on a request for reconsideration, is being repealed.
- Section 1311 - **Administrative Review by Commission:** Amendments reflect the Commission's decision to make the *Official Disability Guidelines* applicable to all body parts and conditions and to mandate the use of the Medical Treatment Preauthorization Form.

1. Are the rules legal, consistent with legislative intent, and within the agency's statutory authority?

Yes. The Commission cites to both general and specific authority for the rules. Of particular significance is A.R.S. § 23-107(A)(1), under which the Commission "has full power, jurisdiction and authority to [f]ormulate and adopt rules and regulations for effecting the purposes of this article [A.R.S. Title 23, Chapter 1, Article 1, Industrial Commission]."

2. Do the rules establish a new fee or contain a fee increase?

No. The rules do not establish a new fee or contain a fee increase.

3. Summary of the agency's economic impact analysis:

In this rulemaking, the Commission is promulgating rules that will implement evidence-based treatment guidelines for injured workers in the workers' compensation system. This complies with directives from the Arizona Legislature. The Commission notes that the changes to the rules will improve medical outcomes for injured workers and decrease processing times for claims. In FY 2016, 91,504 Workers' Compensation Claims were filed in Arizona. This is a rate of 3,636 claims per 100,000 workers.

4. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

The Commission concludes that this rulemaking is required by legislative directives. This rulemaking will decrease the administrative burden associated with workers' compensation claims for all stakeholders. Any costs are minimal. The benefits outweigh the costs.

5. What are the economic impacts on stakeholders?

Key stakeholders are the Commission, the Arizona Department of Administration-Risk Management Division, political subdivisions that participate in the workers' compensation system, insurance carriers, medical providers, injured employees, and any businesses that participate in the workers' compensation system.

The Commission will benefit from this rulemaking because it reduces the administrative burden associated with workers' compensation claims. The rulemaking also utilizes current evidence-based medicine through the Official Disability Guidelines.

The Division, political subdivisions that participate in the worker's compensation system, and businesses that participate in the workers' compensation system will bear some costs associated with adapting to the new rules. The Commission notes that these entities will also benefit from the rulemaking because it will significantly reduce the amount of administrative burden required for injured employees to seek treatment. Reducing administrative delays will reduce the amount of wasted time for employers, both public and private.

Insurance carriers, medical providers, and injured workers will benefit from this rulemaking because it reduces their administrative burden when providing treatment for workers through the workers' compensation system. Reducing the administrative burden for these stakeholders could improve medical outcomes for injured workers.

6. Does the agency adequately address the comments on the proposed rules and any supplemental proposals?

Yes. The Commission indicates that it received two public comments on the rulemaking, both on behalf of CopperPoint Insurance Companies, expressing support for the rulemaking.

7. Are the final rules a substantial change, considered as a whole, from the proposed rules and any supplemental proposals?

No. Only non-substantive technical changes were made between the Notice of Proposed Rulemaking and the Notice of Final Rulemaking.

8. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. Federal law is not applicable to the subject matter of the rules.

9. Do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

No. The rules do not require a permit or license.

10. Does the preamble disclose a reference to any study relevant to the rules that the agency reviewed and either did or did not rely upon?

Yes. The Commission indicates that it has not reviewed and is not relying upon any study in its evaluation of, or justification for, the subject rulemaking. The Commission notes that it did consider various study materials prior to entering into the rulemaking, which are available at <https://www.azica.gov/official-disability-guidelines-study-materials-and-public-comments>.

11. Conclusion

The Commission is requesting a delayed effective date of October 1, 2018. Council staff recommends approval of the rulemaking.

THE INDUSTRIAL COMMISSION OF ARIZONA
OFFICE OF THE DIRECTOR



DALE L. SCHULTZ, CHAIRMAN
JOSEPH M. HENNELLY, JR., VICE CHAIR
SCOTT P. LEMARR, MEMBER
STEVEN J. KRENZEL, MEMBER

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May 22, 2018

Sent via e-mail to grrc@azdoa.gov
Nicole Ong Colyer, Chair
Governor's Regulatory Review Council
100 North 15th Avenue, Suite 402
Phoenix, Arizona 85007

RE: Request for Approval of Rulemaking: A.A.C. Title 20, Chapter 5, Articles 1
("Workers' Compensation Practice and Procedure") and 13 ("Treatment Guidelines")
Rulemaking

Dear Ms. Colyer:

The Industrial Commission of Arizona (the "Commission") requests that the Governor's Regulatory Review Council (the "Council") approve the above-referenced rulemaking. Pursuant to A.A.C. R1-6-201(A)(1), the Commission provides the following information:

a. The close of record date.

April 16, 2018.

b. Whether the rulemaking activity relates to a five-year review report and, if applicable, the date the report was approved by the Council.

The subject rulemaking activity does not relate to a five-year review report.

c. Whether the rule establishes a new fee and, if it does, citation of the statute expressly authorizing the new fee.

The subject rulemaking does not establish a new fee.

d. Whether the rule contains a fee increase.

The subject rulemaking does not contain a fee increase.

e. Whether an immediate effective date is requested for the rule under A.R.S. § 41-1032.

The Commission is not requesting an immediate effective date.

- f. A certification that the preamble discloses a reference to any study relevant to the rule that the agency reviewed and either did or did not rely on in the agency's evaluation of or justification for the rule.**

The Commission did not rely on a study for justification of the subject rulemaking.

- g. If one or more full-time employees are necessary to implement and enforce the rule, a certification that the preparer of the economic, small business, and consumer impact statement has notified the Joint Legislative Budget Committee of the number of new full-time employees necessary to implement and enforce the rule.**

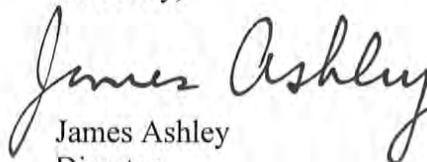
The Commission does not anticipate that it will be necessary to hire any new full-time employees to implement or enforce the subject rulemaking.

- h. A list of all documents enclosed.**

Governor's Office Approval of Rulemaking
Notice of Final Rulemaking
Economic Impact Statement
Written Comments Received by the Commission Concerning the Subject Rulemaking
A Transcript of Oral Comments Received
General and Specific Statutes Authorizing Rulemaking

Thank you for your consideration. Should you have any questions regarding the amendments, please contact Jason Porter, Chief Legal Counsel, at 602-542-5781.

Sincerely,



James Ashley
Director

Enclosures

NOTICE OF FINAL RULEMAKING
TITLE 20. COMMERCE, FINANCIAL INSTITUTIONS, AND INSURANCE
CHAPTER 5. INDUSTRIAL COMMISSION OF ARIZONA

PREAMBLE

<u>1. Article, Part, or Section Affected (as applicable)</u>	<u>Rulemaking Action</u>
R20-5-106	Amend
R20-5-1301	Amend
R20-5-1302	Amend
R20-5-1303	Amend
R20-5-1309	Amend
R20-5-1310	Amend
R20-5-1311	Amend

2. Citations to the agency's statutory rulemaking authority to include both the authorizing statute (general) and the implementing statute (specific):

Authorizing statutes: A.R.S. §§ 23-107(A)(1); 23-921(B)

Implementing statutes: A.R.S. § 23-1062.03; Laws 2017, Ch. 287, § 5

3. The effective date of the rules:

a. If the agency selected a date earlier than the 60 day effective date as specified in A.R.S. § 41-1032(A), include the earlier date and state the reason or reasons the agency selected the earlier effective date as provided in A.R.S. § 41-1032(A)(1) through (5):

Not applicable

b. If the agency selected a date later than the 60 day effective date as specified in A.R.S. § 41-1032(A), include the later date and state the reason or reasons the agency selected the later effective date as provided in A.R.S. § 41-1032(B):

The Industrial Commission of Arizona (the "Commission") selected October 1, 2018, as the effective date for the subject rulemaking. As discussed in Item 6, the Commission took formal action on December 21, 2017, to modify the applicability of the *Official Disability Guidelines*, but delayed implementation until October 1, 2018. The delayed implementation date was intended to provide impacted stakeholders with sufficient time to prepare for the expanded applicability of the *Official Disability Guidelines*. The Commission selected October 1, 2018, as the effective date for the subject rulemaking so that the rule changes pertaining to streamlining the authorization process will take effect on the same date as the expanded applicability of the *Official Disability Guidelines*. Good cause exists for the selected effective date and the public interest will not be harmed by the selected date.

4. Citations to all related notices published in the *Register* as specified in R1-1-409(A) that pertain to the record of the final rulemaking package:

Notice of Rulemaking Docket Opening: 24 A.A.R. 578, March 16, 2018

Notice of Proposed Rulemaking: 24 A.A.R. 565, March 16, 2018

5. The agency's contact person who can answer questions about the rulemaking:

Name: Jason M. Porter

Address: Industrial Commission of Arizona

Legal Division

800 W. Washington St.

Phoenix, Arizona 85007

Telephone: (602) 542-5781

Fax: (602) 542-6783

E-mail: jason.porter@azica.gov

6. An agency's justification and reason why a rule should be made, amended, repealed or renumbered, to include an explanation about the rulemaking:

In 2012, the Arizona Legislature directed the Commission to "develop and implement a process for the use of evidence-based treatment guidelines, where appropriate, to treat injured workers." *See* A.R.S. § 23-1062.03. With significant stakeholder input, the Commission promulgated twelve rules, published in Title 20, Chapter 5, Article 13 of the Arizona Administrative Code ("Article 13" or the "Treatment Guidelines"). Among other things, the Treatment Guidelines: (1) prescribe the use of evidence-based treatment guidelines as a tool to support clinical decision making and quality health care delivery to injured workers within Arizona's workers' compensation system; (2) adopted Work Loss Data Institute's *Official Disability Guidelines – Treatment in Workers Compensation* (the "*Official Disability Guidelines*") as the standard reference for evidence-based medicine; (3) until further action of the Commission, limited the applicability of the *Official Disability Guidelines* to the management of chronic pain and the use of opioids for all stages of pain management; (4) outlined an administrative process for the Commission to modify the applicability of the *Official Disability Guidelines*; (5) outlined a noncompulsory process for a medical provider or injured worker to seek preauthorization from a payer for medical services or treatment; (6) established an administrative review process to help resolve disputes between medical providers, injured workers, and payers; and (7) outlined procedures for bringing unresolved disputes to the Commission for administrative hearing.

Streamlining the Treatment Guidelines' Authorization Process

In 2017, the Arizona Legislature (in Laws 2017, Ch. 287, § 5) directed the Commission to "review and determine a process for streamlining the authorization process for treatment that is within the evidence-based treatment guidelines." The Legislature required the Commission to complete the review process on or before December 31, 2017.

Consequently, on June 29, 2017, the Commission directed its Medical Resource Office to: (1) conduct a review of the existing authorization process under the Treatment Guidelines; and (2) make a recommendation to the Commission regarding "streamlining the authorization process for treatment that is within the evidence-based treatment guidelines." Stakeholders were provided opportunities to offer suggestions and comments regarding streamlining the authorization process, including during a public hearing conducted on August 17, 2017. At its December 14, 2017 public meeting, the Commission completed its review of the existing authorization process. Based upon suggestions submitted by interested stakeholders, the Commission approved the following methods for streamlining the Article 13 authorization process:

1. Develop and mandate the use of a Medical Treatment Preauthorization Form with accompanying instructions; and
2. Reduce the time period within which a payer must respond to requests for preauthorization or reconsideration from ten business days to seven business days.

Modifying the Applicability of the Official Disability Guidelines

In addition to efforts to streamline the Treatment Guidelines, the Commission carefully studied the propriety of modifying the applicability of the *Official Disability Guidelines* pursuant to A.R.S. § 23-1062.03 and A.A.C. R20-5-1301(C). Under A.A.C. R20-5-1301(B), absent further action of the Commission, the *Official Disability Guidelines* only applied to the management of chronic pain and the use of opioids for all stages of pain management. Under R20-5-1301(C), however, the Commission was authorized to "modify or change the applicability of the guidelines" if the Commission determined that modification or changing the applicability of the guidelines would: (1) improve medical treatment for injured workers; (2) make treatment and claims processing more efficient and cost effective; and (3) the guidelines adequately cover the relevant body parts or conditions.

On June 29, 2017, the Commission directed its Medical Resource Office to conduct an investigation and study regarding the three modification criteria. Consistent with the procedural requirements of R20-5-1301(C), the Commission publicly posted study materials and provided an opportunity for public comment. The Commission conducted a public hearing on November 30, 2017.

On December 21, 2017, following an evaluation of the study materials and stakeholder feedback, the Commission determined (at a public Commission meeting) that modifying the applicability of the *Official Disability Guidelines* to cover all body parts and conditions would improve medical treatment for injured workers and would make treatment and claims processing more efficient and cost effective. In addition, based upon written reviews received from board-certified physicians in Arizona (representing various specialties), the Commission determined that the *Official Disability Guidelines* adequately cover all body parts and conditions. Based on these determinations, the Commission took formal action to modify the applicability of the *Official Disability Guidelines* to all body parts and conditions, effective October 1, 2018.

The subject rulemaking described herein formalizes the Commission's actions, outlined above, and includes the following:

- Amends R20-5-106 ("Commission Forms") to describe and mandate the use of the Medical Treatment Preauthorization Form.
- Amends R20-5-1301 ("Adoption and Applicability of the Article") and R20-5-1311 ("Administrative Review by Commission") to reflect the Commission's December 21, 2017 decision to modify the applicability of the *Official Disability Guidelines* to apply to all body parts and conditions and to state applicable effective dates. (Note: This rulemaking is non-substantive, as the Commission already completed the substantive process for modifying the applicability of the *Official Disability Guidelines* under R20-5-1301(C).)
- Amends R20-5-1303 ("Provider Request for Preauthorization"); R20-5-1309 ("Payer Decision on Request for Preauthorization"); R20-5-1310 ("Payer Reconsideration on Request for Preauthorization"); and R20-5-1311 ("Administrative Review by Commission") to: (1) mandate the use of the Medical Treatment Preauthorization Form; (2) reduce the time period for a payer to respond to a request for preauthorization or reconsideration from ten business days to seven business days; (3) remove pre-existing requirements for a request for preauthorization, a decision on a request for preauthorization, a decision on a request for reconsideration, and a request for administrative review; and (4) provide that a payer's decision on a request for preauthorization or reconsideration may be provided to the injured worker's authorized representative.
- Amends R20-5-1309 ("Provider Decision on Request for Preauthorization") to require that a payer who receives a deficient request for preauthorization – either because it is incomplete or not submitted using the Medical Treatment Preauthorization Form – must, within seven business days of receiving and identifying the deficient request, either: (1) act on the deficient request by using the Medical Treatment Preauthorization Form; or (2) notify the provider making the request that a request for preauthorization must be submitted on the Medical Treatment Preauthorization Form.
- Various non-substantive amendments.

7. A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Modifying the Applicability of the *Official Disability Guidelines*

The subject rulemaking is merely intended to update Article 13 to reflect the formal action taken by the Commission on December 21, 2017, pursuant to A.A.C. R20-5-1301(C). Consequently, the Commission has not reviewed and is not relying upon any study in its evaluation of or justification for the subject rulemaking as it related to modifying the applicability to the *Official Disability Guidelines*.

As concerns the Commission's December 21, 2017 action, the Commission considered various study materials prior to completing the regulatory process for modifying the applicability of the *Official*

Disability Guidelines. The study materials considered by the Commission during the administrative process are available at <https://www.azica.gov/official-disability-guidelines-study-materials-and-public-comments>. The study materials are also available for inspection or reproduction at the Industrial Commission of Arizona, Medical Resource Office, 800 West Washington Street, Phoenix, Arizona 85007.

Streamlining the Treatment Guidelines' Authorization Process

The Commission has not reviewed and is not relying upon any study in its evaluation of or justification for the subject rulemaking relating to streamlining the Treatment Guidelines' authorization process.

8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

9. A summary of the economic, small business, and consumer impact:

Modifying the Applicability of the Official Disability Guidelines

The amendments related to modification of the applicability of the *Official Disability Guidelines* are non-substantive, as the rulemaking is merely intended to update Article 13 to reflect the formal action previously taken by the Commission pursuant to A.A.C. R20-5-1301(C). Therefore, the subject rulemaking related to modification of the applicability of the *Official Disability Guidelines* creates no economic, small business, or consumer impact beyond that already created by Article 13 and the Commission's formal action taken on December 21, 2017.

Streamlining the Treatment Guidelines' Authorization Process

The Commission anticipates that the amendments related to streamlining the authorization process contained in Article 13 will have some impact on participants in the workers' compensation system. Participants include injured employees who receive medical treatment and/or services related to an industrial injury, medical providers who treat injured workers, and payers (insurance carriers, self-insured employers, and the Commission's Special Fund) who administer workers' compensation claims. Although participants in the workers' compensation system are already subject to the Treatment Guidelines, the subject rulemaking will:

- Mandate the use of the “Medical Treatment Preauthorization Form” when a medical provider seeks preauthorization for medical treatment or services;
- Reduce the time period for a payer to respond to a request for preauthorization or reconsideration from ten business days to seven business days; and
- Require a payer who receives an incomplete request for preauthorization or a request for preauthorization that is not submitted on the Medical Treatment Preauthorization Form to, within seven business days of receiving and identifying the deficient request, either: (1) act on the deficient request by using the Medical Treatment Preauthorization Form; or (2) notify

the provider making the request that a request for preauthorization must be submitted on the Medical Treatment Preauthorization Form.

The Commission anticipates that the amendments will streamline the authorization process, reduce delays in providing employees with reasonably-required medical treatment, improve the processing of workers' compensation claims, and reduce litigation time and costs.

10. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

All references in the amendments to "pre-authorization" or "Pre-Authorization" were changed to "preauthorization" or "Preauthorization." These changes are non-substantive and were made for consistency and because the term "preauthorization" is defined in the Treatment Guidelines. *See* A.A.C. R20-5-1302.

11. An agency's summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

One written comment was submitted by Mark A. Kendall (Associate General Counsel) on behalf of CopperPoint Insurance Companies. Mr. Kendall expressed full support for the subject rulemaking, noting that it is responsive to stakeholder concerns and the product of a comprehensive review process by the Commission. He specifically noted that the subject rulemaking: (1) is reasonable, balanced, concise, and "efficient with regard to carrying out [statutory] mandates"; (2) will "make the authorization process easier and quicker for providers, payers, and the Commission"; (3) "should result in [a] speedier and more efficient process"; and (4) "is consistent with legislative intent."

One oral comment was made by Gale Vogler (Director) on behalf of CopperPoint Insurance Companies. Like Mr. Kendall, Ms. Vogler expressed full support for the subject rulemaking, noting that it "will make the authorization process easier for all involved parties" and "is consistent with legislative intent."

12. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

Not applicable

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

The subject rulemaking does not require issuance of a regulatory permit or license.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

Not applicable. The subject rulemaking does not implicate federal law.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

No analysis was submitted.

13. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rule:

None

14. Whether the rule was previously made, amended or repealed as an emergency rule. If so, cite the notice published in the *Register* as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:

Not applicable

15. The full text of the rules follows:

TITLE 20. COMMERCE, FINANCIAL INSTITUTIONS, AND INSURANCE
CHAPTER 5. THE INDUSTRIAL COMMISSION OF ARIZONA
ARTICLE 1. WORKERS' COMPENSATION PRACTICE AND PROCEDURE

Section

R20-5-106. Commission Forms

ARTICLE 13. TREATMENT GUIDELINES

Section

R20-5-1301. Adoption and Applicability of the Article

R20-5-1302. Definitions

R20-5-1303. Provider Request for Preauthorization

R20-5-1309. Payer Decision on Request for Preauthorization

R20-5-1310. Payer Reconsideration on Request for
Preauthorization

R20-5-1311. Administrative Review by Commission

ARTICLE 1. WORKERS' COMPENSATION PRACTICE AND PROCEDURE

R20-5-106. Commission Forms

- A. The following forms shall be used when applicable:
1. Employer's report of industrial injury (form 101) shall contain:
 - a. Employee, employer, and carrier identification;
 - b. Description of employment;
 - c. Description of accident and injury;
 - d. Description of medical treatment received by employee;
 - e. Employee's wage data;
 - f. Date, signature, and title of employer or the employer's representative; and
 - g. Statement doubting the validity of the claim, if the employer doubts the validity of the claim.
 2. The physician's portion of the worker's and physician's report of injury (form 102) shall contain:
 - a. Name and address of physician;
 - b. Information regarding preexisting conditions;
 - c. Information regarding the industrial injury, treatment, and prognosis;
 - d. Statement authorizing the attachment of a medical report that contains the information required in form 102; and
 - e. Physician's signature and date.
 3. Notice of supportive medical benefits (form 103) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Description of authorized medical benefits;
 - c. Date the notice is mailed;
 - d. Name and telephone number of the individual issuing the notice; and
 - e. Statement regarding reopening and appeal rights including filing requirements.
 4. Notice of claim status (form 104) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Status of the claim;
 - c. Date the notice is mailed;
 - d. Name and telephone number of the individual issuing the notice; and
 - e. Statement of a party's hearing and appeal rights including filing requirements.
 5. Notice of suspension of benefits (form 105) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Effective date of the suspension;
 - c. Reasons for the suspension;
 - d. Date the notice is mailed;
 - e. Name and telephone number of the individual issuing the notice; and

- f. Statement of a party's hearing and appeal rights including filing requirements.
6. Notice of permanent disability or death benefits (form 106) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Applicable statutory authority under which compensation is paid;
 - c. Disability and compensation information;
 - d. Date the notice is mailed;
 - e. Name and telephone number of the individual issuing the notice; and
 - f. Statement regarding hearing and appeal rights including filing requirements.
 7. Notice of permanent disability and request for determination of benefits (form 107) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Type of disability;
 - c. Applicable statutory authority for designated disability;
 - d. Designation of dependents where death is involved;
 - e. Designation of advanced payments and amount of the advance;
 - f. Date the notice is mailed; and
 - g. Name and telephone number of the individual issuing the notice.
 8. Carrier's recommended average monthly wage calculation (form 108) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Employment and wage history;
 - c. Designation of dependents; and
 - d. Carrier's calculations for the recommended average monthly wage and the basis for the calculation.
 9. Notice of permanent compensation payment plan (form 111) shall contain:
 - a. Employee, employer, and carrier identification;
 - b. Amount of permanent compensation and description of payment plan;
 - c. Name of the responsible entity contracted by the carrier to administer the payment plan;
 - d. Statement that the carrier remains the responsible party for payment;
 - e. Statement regarding supportive care and reopening rights;
 - f. Date the notice is mailed; and
 - g. Name and telephone number of the individual issuing the notice.
 10. Report of insurance coverage (form 0006) shall contain:
 - a. Name and address of the carrier;
 - b. Legal name of entity that the carrier insures;
 - c. All other insured names or subsidiary entities under which the carrier's insured does business in Arizona;
 - d. Address of all insured entities with insurance policy information for each address; and
 - e. Employer Identification Number (EIN), Taxpayer Identification Number (TIN), or Federal

Identification Number (FIN) assigned to each insured person or entity.

11. Report of significant work exposure to bodily fluids or other infectious material shall contain:
 - a. The requirements set forth in A.R.S. §§ 23-1043.02(B), 23-1043.03(B), and 23-1043.04(B);
 - b. Employee identification,
 - c. Employer identification,
 - d. Source of exposure person identification (if known),
 - e. Details of the exposure including:
 - i. Date of exposure,
 - ii. Time of exposure,
 - iii. Place of exposure,
 - iv. How exposure occurred,
 - v. Type of bodily fluid or fluids,
 - vi. Source of bodily fluid or fluids,
 - vii. Part or parts of body exposed to bodily fluid or fluids,
 - viii. Presence of break or rupture in skin or mucous membrane, and
 - ix. Witnesses (if known), and
 - f. Dated signature of employee or the employee's authorized representative.

12. The medical treatment preauthorization form (MRO-1.1) shall contain five sections, as follows:

- a. Section I (Provider Request for Preauthorization) shall contain:
 - i. Injured employee identification, including name, date of injury, date of birth, and payer claim number (if known);
 - ii. Provider identification, including name, phone number, provider medical specialty, preferred method of contact, and contact information;
 - iii. Payer identification, including name and contact information (i.e., mailing address, fax number, or e-mail address);
 - iv. Information regarding requested medical treatment and/or services, including:
 1. Applicable diagnosis and/or ICD codes;
 2. A detailed statement of the treatment or services requested;
 3. Applicable Current Procedural Terminology (CPT) codes and/or National Drug Codes (NDC);
 4. Type of request (i.e., routine or urgent); and
 5. An indication as to whether the provider has attached documentation to support the medical necessity and appropriateness of the requested treatment and/or services; and
 - v. Dated signature or electronic signature of provider or provider's authorized representative.
- b. Section II (Payer Decision on Request for Preauthorization) shall contain:
 - i. Payer's preferred method of contact and contact information;

- ii. Date request for preauthorization is received;
 - iii. The Commission claim number;
 - iv. The payer's decision (i.e., approved, partial denial, denied, request for preauthorization incomplete, or IME requested);
 - v. An indication as to whether the payer has attached a statement of what treatment and/or services have been authorized, including, if applicable, a partial authorization, and, if the request for preauthorization is denied, in whole or in part, a statement of explanation that includes the medical reason supporting the payer's decision; and
 - vi. Dated signature or electronic signature of payer or payer's authorized representative.
- c. Section III (Provider or Employee Request for Reconsideration of Payer Decision) shall contain:
- i. An indication as to whether the provider or injured employee has attached a statement of the specific reasons and justifications to support the request for reconsideration;
 - ii. An indication as to whether the provider or injured employee has attached documentation to support the medical necessity and appropriateness of the requested treatment and/or services, if not previously provided; and
 - iii. Dated signature or electronic signature of provider, provider's authorized representative, injured employee, or injured employee's authorized representative.
- d. Section IV (Payer Decision on Request for Reconsideration) shall contain:
- i. Date request for reconsideration received;
 - ii. The payer's decision (e.g., approved, partial denial, denied, or IME requested);
 - iii. An indication as to whether the payer has attached a statement of what has been authorized, including if applicable, a partial authorization, and, if the request for preauthorization is denied, in whole or in part, a statement of explanation that includes the medical reason supporting the payer's decision; and
 - iv. Dated signature or electronic signature of payer or payer's authorized representative.
- e. Section V (Provider or Employee Request for Administrative Peer Review) shall contain:
- i. An indication of the basis for the request for administrative peer review (e.g., payer non-response, denial (in whole or in part) of requested treatment or services, the payer's decision on the request for preauthorization denied treatment or services that are subject to R20-5-1304(B));
 - ii. An indication as to whether the provider or injured employee has attached copies of relevant medical records and, if applicable, documentation related to the payer's non-response;
 - iii. An indication as to whether the provider or injured employee has attached all documentation and statements previously attached to Sections I-IV; and
 - iv. Dated signature or electronic signature of provider, provider's authorized representative, injured employee, or injured employee's authorized representative.

B. The following forms may be used:

1. The workers' portion of the worker's and physician's report of injury (form 102) requests:
 - a. Employee, employer, insurance carrier, and physician identification;
 - b. Description of the accident, including date of injury; and
 - c. Date and signature of the employee or the employee's authorized representative.
2. Worker's report of injury (form 407) requests:
 - a. Employee and employer identification,
 - b. Job title,
 - c. Employment description,
 - d. Employee's wage data,
 - e. Date of injury,
 - f. Accident and injury descriptions,
 - g. Medical treatment information,
 - h. Information concerning prior injuries of the employee,
 - i. Disability income, and
 - j. Date and signature of the employee or the employee's authorized representative.
3. Worker's annual report of income (form 110-A) requests:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Employment and wage history for the preceding 12 months;
 - c. Date and signature of the employee or the employee's authorized representative attesting to the truthfulness of the employment and wage information; and
 - d. Statement that failure to submit an annual report of income may result in a suspension of benefits by the carrier or self-insured employer.
4. Notice of intent to suspend (form 110-B) requests:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Employment and wage history for the preceding 12 months;
 - c. Date and signature of the employee or the employee's authorized representative attesting to the truthfulness of the employment and wage information;
 - d. Statement that failure to submit an annual report within 30 days of the date of the notice shall result in a suspension of benefits by the carrier or self-insured employer.
5. Request for hearing requests:
 - a. Names of the employee, employer, and insurance carrier;
 - b. Claim identification;
 - c. Identification of the award, notice, order, or determination protested and reason(s) for the protest;
 - d. Estimated length of time for hearing and city or town in which hearing is requested;
 - e. Name and address of any witness for whom a subpoena is requested; and
 - f. Date and signature of party or the party's authorized representative.

6. Petition to reopen requests:
 - a. Names of the employee, employer, and insurance carrier;
 - b. Claim identification;
 - c. Identification or description of the new, additional, or previously undiscovered temporary or permanent disability or medical condition justifying the reopening of the claim; and
 - d. Employee's medical and employment history.
7. Petition for rearrangement or readjustment of compensation requests:
 - a. Names of the employee, employer, and insurance carrier;
 - b. Claim identification;
 - c. Income and employment history;
 - d. Medical history; and
 - e. Statement of the basis for the increase or decrease in earning capacity.
8. Claim for dependent's benefits-fatality form requests:
 - a. Identification of dependent filing claim;
 - b. Identification of deceased;
 - c. Date of death;
 - d. Date of injury, if different than date of death;
 - e. Name and address of employer at time of deceased's death;
 - f. Statement of cause of death;
 - g. Names and addresses of health care providers rendering treatment to deceased in two years before death;
 - h. Conditions treated by health care providers in the two years before deceased's death;
 - i. If claim is for spousal benefits, the form requests:
 - i. Name, address, and date of birth of spouse;
 - ii. Copy of marriage certificate;
 - iii. Date and place of marriage to deceased;
 - iv. History of prior marriages of deceased and deceased's spouse, including copies of divorce decrees; and
 - v. Statement of living arrangements at time of deceased's death, including reason for living apart at time of death, if applicable;
 - j. If claim is for a dependent child, the form requests:
 - i. Name, date of birth, and address of child at time of deceased's death;
 - ii. List of children in care and custody of current spouse; and
 - iii. Statement of whether unborn child is expected and date expected;
 - k. If claim is for dependent other than a child, the form requests:
 - i. Name and address of other dependent,

- ii. Relationship of other dependent to deceased, and
 - iii. Statement of the nature and extent of dependency; and
 - l. Date, telephone number, and signature of dependent or authorized representative of dependent.
9. Request to leave the state form requests:
- a. Employee, insurance carrier, and claim identification;
 - b. Reason for requesting to leave Arizona;
 - c. Dates leaving and returning to Arizona;
 - d. Out-of-state address;
 - e. Name and telephone number of attending physician; and
 - f. Date and signature of the employee or the employee's authorized representative.
10. Request to change doctors form requests:
- a. Employee, insurance carrier, and claim identification;
 - b. Reason for requesting change of doctor;
 - c. Name and phone number of claimant's current doctor;
 - d. Name and phone number of doctor claimant requests to change to; and
 - e. Date and signature of the employee or the employee's authorized representative.
11. Complaint of bad faith and unfair claim processing practices requests:
- a. Employee, employer, and insurance carrier identification;
 - b. Description of the alleged bad faith or unfair claim processing practices;
 - c. Date of the complaint; and
 - d. Name, address, and telephone number of the person signing the complaint.
12. Certification of employer's drug and alcohol testing policy requests:
- a. Employer's certification as described under A.R.S. § 23-1021(F),
 - b. Name and federal identification number of the employer, and
 - c. Name of all subsidiaries and locations of the employer.
- C. Optional use of a form described in subsection (B) does not affect any requirement under the Act or this Article.
- D. Forms or format for the forms described in this Section are available from the Commission.
- E. Forms prescribed under this Section shall not be changed, amended, or otherwise altered without the prior written approval of the Commission.

ARTICLE 13. TREATMENT GUIDELINES

R20-5-1301. Adoption and Applicability of the Article

- A. The Industrial Commission of Arizona (Commission) has adopted the Work Loss Data Institute's *Official Disability Guidelines – Treatment in Workers Compensation* (ODG) as the standard reference for evidence-based medicine used in treating injured workers within the context of Arizona's workers' compensation system. By adopting and referencing the most recent edition (at the time of treatment), and

continuously updated Official Disability Guidelines, the Commission can ensure the latest available medical evidence is used in making medical treatment decisions for injured workers.

- B. Until further action of the Commission, the guidelines shall apply to ~~the management of chronic pain and the use of opioids for all stages of pain management~~. For purposes of this process, ~~chronic pain shall be defined by the guidelines~~ all body parts and conditions.
- C. The Commission may modify or change the applicability of the guidelines as described in subsection (B) if the Commission determines that modification or changing the applicability of the guidelines will: 1) improve medical treatment for injured workers, 2) make treatment and claims processing more efficient and cost effective, and 3) if the Commission's modification expands the applicability of the guidelines, the guidelines adequately cover the relevant body parts or conditions. Before taking action to modify or change the applicability of the guidelines, the Commission shall provide an opportunity for public comment and hold a public hearing. A decision of the Commission under this subsection shall be made by a majority vote of a quorum of Commission members present at a public meeting.
- D. Action taken by the Commission to modify or change the applicability of the guidelines under subsection (C) shall be published in the minutes of the Commission meeting when such action was taken. The minutes of this action shall be published on the Commission's website and shall be available from the Commission upon request.
- E. The guidelines shall apply prospectively. Recommendations provided in the guidelines related to the management of chronic pain and the use of opioids for all stages of pain management shall apply to medical treatment or services occurring on or after October 1, 2016 ~~the effective date of this Article~~. For purposes of this process, chronic pain shall be defined by the guidelines. Recommendations provided in the guidelines related to all other body parts and conditions shall apply to medical treatment or services occurring on or after October 1, 2018.
- F. This Article applies to all claims filed with the Commission.
- G. This Article only applies to medical treatment and services for body parts and conditions that have been accepted as compensable.
- H. The guidelines are to be used as a tool to support clinical decision making and quality health care delivery to injured employees. The guidelines set forth care that is generally considered reasonable and are presumed correct if the guidelines provide recommendations related to the requested treatment or service. This is a rebuttable presumption and reasonable medical care may include deviations from the guidelines. To support a request to deviate from the guidelines, the provider must produce documentation and justification that demonstrates by a preponderance of credible medical evidence a medical basis for departing from the guidelines. Credible medical evidence may include clinical expertise and judgment.
- I. The Commission shall provide administrative review and oversight of this Article.

R20-5-1302. Definitions

In this Article and R20-5-106(A)(12), unless the context otherwise requires:

"Act" means the Arizona Workers' Compensation Act, A.R.S. Title 23, ~~Ch. Chapter 6, Articles 1 through 11.~~

"Active Practice" means performing patient care for a minimum of eight hours per week in one of the five preceding years.

"Administrative Law Judge" or "ALJ" means a hearing officer appointed under A.R.S. § 23-108.02.

"Administrative Review" means a process that includes a peer review for preauthorization of a request for medical treatment or services conducted pursuant to R20-5-1311~~that has been denied or partially denied by a payer.~~ The administrative review process will be managed by the Medical Resource Office (MRO) at the Industrial Commission of Arizona.

"American Board of Medical Specialties" means the organization that develops a uniform system for specialty boards to administer examinations for certification of physicians within specific medicine specialties.

"American Osteopathic Association" means the organization that develops a uniform system for specialty boards to administer examinations for certification of osteopathic physicians within specific osteopathic medicine specialties.

"Applicability" means the body parts and medical conditions that are covered under this Article and authorized by the Commission under R20-5-1301(B) and (C).

"Claim" means the workers' compensation claim filed by the injured employee under the Act.

"Contractor" means an independent peer review organization accredited by URAC.

"Fast Track ALJ Dispute Resolution Program" or "fast track process" means the voluntary dispute resolution process set forth in R20-5-1312(B).

"International Classification of Diseases Code" or "ICD Code" means a set of medical diagnostic codes that creates a universal language for reporting diseases and injury.

"International Classification of Diseases" or "ICD" means an official list of categories of diseases, physical and mental, that is issued and maintained by the World Health Organization.

"IME" means an independent medical examination scheduled under R20-5-114.

"Injured Employee" means a person defined in A.R.S. § 23-901 whose claim has been accepted for workers' compensation benefits.

"Medical File Review Opinions" means a formal examination of patient data and medical records for the purpose of determining the need for medical treatment, services or both.

"Payer" means an insurance carrier defined under A.R.S. § 23-901, a self-insured employer defined in R20-5-102, a third-party administrator, and the Special Fund of the Industrial Commission of Arizona.

"Peer Review" means an independent medical review conducted by an individual meeting the requirements of R20-5-1311(I).

"Preauthorization" means at the written request prescribed by R20-5-1303 from a provider to a payer requesting approval to provide medical treatment or services to an injured employee.

"Provider" means a physician as defined in R20-5-102.

"Reconsideration" means a written request to the payer or identified review organization by an injured employee or medical provider to reconsider a previous payer decision to deny medical treatment or services and that identifies the specific justification to support the request.

"Third-Party Administrator" or "TPA" means an organization that processes insurance or employee benefit claims for a separate entity.

"Treatment Guidelines" or "guidelines" means medical treatment guidelines that are used as a tool to support clinical decision making and quality health care delivery to injured employees.

"URAC" refers to URAC, a non-profit organization formerly known as the Utilization Review Accreditation Commission.

R20-5-1303. Provider Request for Preauthorization

- A. No preauthorization is required under the Act to ensure payment for reasonably required medical treatment or services. While preauthorization is not required under the Act, a provider may seek preauthorization as provided in this subsection.
- B. A provider shall submit a request for preauthorization in writing using Section I (Provider Request for Preauthorization) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12). A provider shall attach documentation to a request for preauthorization that supports the medical necessity and appropriateness of the treatment or services requested, such as office notes and diagnostic reports, which shall include the following information:
1. Patient information (including date of injury, date of birth, and payer claim number);
 2. Diagnosis and ICD code;
 3. Date of request;
 4. Type of request – Initial, Routine, Urgent, or Life Threatening;
 5. A statement of the treatment or services requested. Where appropriate, information about quantity, strength, duration and frequency of the treatment or services should be included. Use of the applicable codes should also be included and will facilitate the process; and
 6. Documentation, if not already provided, that supports the medical necessity and appropriateness of the treatment or services requested, such as office notes and diagnostic reports.
- C. A provider may submit the request for preauthorization by mail, electronically or by fax.

R20-5-1309. Payer Decision on Request for Preauthorization

- A. Except as provided in ~~subsection~~subsections (C) or (D), a payer shall communicate to the provider its decision on a request for preauthorization no later than ~~107~~ business days after the request is received. ~~This~~The decision shall be issued in writing using Section II (Payer Decision on Request for Preauthorization) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12). A payer shall attach to the decision a statement of what has been authorized, including, if applicable, a partial authorization, and, if the request for preauthorization is denied, in whole or in part, a statement of explanation that includes the medical reason supporting the payer's decision~~comply with the requirements set forth in subsection (H). For~~

- purposes of this Section, the ~~107~~ business days begin to run the day after the payer receives the request.
- B. If a payer fails to communicate to a provider its decision on request for preauthorization within ~~107~~ business days, then the payer's failure to take action is deemed a "no response" and the provider or injured employee may submit a request for administrative review directly to the Commission as provided in R20-5-1311.
- C. If a payer receives a request for preauthorization not submitted on Section I (Provider Request for Preauthorization) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12) or an incomplete request for preauthorization using Section I (Provider Request for Preauthorization) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12) that fails to meet the requirements of R20-5-1303, the payer ~~may~~shall, in its discretion:
1. No later than 7 business days after the request is received and identified, Actact on the incomplete request for preauthorization pursuant to subsection (A); or
 2. No later than ~~107~~ business days after the request is received and identified, notify the provider in writing that the request for preauthorization is incomplete or, if applicable, that a request for preauthorization must be submitted on Section I (Provider Request for Preauthorization) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12).
- D. If, no later than ~~107~~ business days after a request for preauthorization has been received, a payer provides written notice to the provider that an IME has been requested under R20-5-114 using Section II (Payer Decision on Request for Preauthorization) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12), then the payer's decision on a request for preauthorization shall be issued no later than ~~107~~ business days after the final IME report has been received by the payer. The payer shall provide a copy of the final IME report to the provider upon receipt of the IME report.
- E. Unless the payer decision was supported by an IME or otherwise falls within subsection R20-5-1304(B), an injured employee or provider may seek reconsideration of a payer decision by submitting a written request to the payer (or review organization identified by the payer) using Section III (Provider or Employee Request for Reconsideration) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12). ~~A provider shall attach to a request for reconsideration a statement of~~ that states the specific reasons and justifications to support the request. If not previously provided, the injured employee or provider shall ~~include~~attach supporting medical documentation with ~~their~~the ~~written~~ request for reconsideration.
- F. An injured employee may seek review of a payer decision that is supported by an IME by requesting an investigation under A.R.S. § 23-1061(J).
- G. Unless the decision was supported by an IME, an injured employee or provider may seek review of a payer decision issued under R20-5-1304(B) by requesting administrative review by the Commission as provided in R20-5-1311.
- H. ~~A payer shall include the following information in its written decision to approve or deny, in whole or in part, the request for preauthorization to provide treatment or services:~~
1. ~~The date on which the request for preauthorization was received;~~

2. Patient information, including date of injury, date of birth, payer claim number and Commission claim number;
3. The date on which an IME was completed, if applicable;
4. A statement of what has been authorized, including if applicable, a partial authorization;
5. A statement of explanation if the request for preauthorization is denied, in whole or in part, which should include the medical reason supporting the payer's decision;
6. A statement of the process under which a provider or injured employee may request reconsideration or review of the payer's denial, in whole or in part, of a request for preauthorization, which shall include the following information;

a. For a decision that is issued without obtaining an IME that is not subject to R20-5-1304(B):

"If you wish to request reconsideration of the decision regarding your request for preauthorization to provide treatment or services, you must send a written request for reconsideration to:

Name of Payer or Review Organization Identified by

Payer Commission Address

Phone

Fax

E-mail

You must include the specific reason and justification to support your request. Please include additional supporting medical documentation if not previously provided."

b. For a decision that is supported by an IME:

"If you wish review of the decision regarding your request for preauthorization to provide treatment or services, then the injured employee is required to file a request for investigation under A.R.S. § 23-1061(J)."

c. For a decision that is issued without obtaining an IME that is subject to R20-5-1304(B):

"If you disagree with this decision and wish to request review by the Industrial Commission of Arizona, then you may submit a request for administrative review under R20-5-1311 to:

Industrial Commission of Arizona

Attn: Medical Resource Office

Commission Address

Commission Telephone Number

The provider shall file this request promptly and include the following information: patient information, including name, address, payer claim number, Commission claim number, and date of injury; diagnosis or ICD code; employer, insurance carrier or TPA information; provider information; information pertaining to request for treatment, including the justification for treatment; applicable treatment guideline or guidelines; denial of treatment by payer; copies of relevant medical information or records; and whether the request for medical treatment or services

~~involves a request for urgent care or a life-threatening condition."~~

~~F.H.~~ A payer shall provide a copy of its written decision to deny treatment or services to the injured employee or, if represented, to the injured employee's authorized representative.

R20-5-1310. Payer Reconsideration on Request for Preauthorization

- A. Except as provided in subsection (C), a payer shall communicate to the provider its decision on a request for reconsideration no later than ~~107~~ business days after the request is received. This decision shall be issued in writing using Section IV (Payer Decision on Request for Reconsideration) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12). A payer shall attach to the decision a statement of what has been authorized, including, if applicable, a partial authorization, and, if the request for preauthorization is denied, in whole or in part, a statement of explanation that includes the medical reason supporting the payer's decision ~~comply with the requirements set forth in subsection (E).~~ For purposes of this subsection, the ~~107~~ business days begin to run the day after the payer receives the request for reconsideration.
- B. If a payer fails to respond to a request for reconsideration within ~~107~~ business days, the provider or injured employee may submit a request for administrative review directly to the Commission as provided in R20-5-1311.
- C. If, no later than ~~107~~ business days after a request for reconsideration has been received, a payer provides written notice to the provider that an IME has been requested under R20-5-114 using Section IV (Payer Decision on Request for Reconsideration) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12), then the payer's decision on a request for reconsideration shall be issued no later than ~~107~~ business days after the final IME report has been received by the payer. The payer shall provide a copy of the final IME report to the provider upon receipt of the report.
- D. Commission Review of Payer Reconsideration Decision:
1. An injured employee or provider may seek review of a payer reconsideration decision by requesting an administrative review by the Commission as provided in R20-5-1311 unless the payer decision was supported by an IME.
 2. An injured employee may seek review of a payer reconsideration decision that is supported by an IME by requesting an investigation under A.R.S. § 23-1061(J).
- E. ~~A payer shall include the following information in its written decision to approve or deny, in whole or in part, a request for reconsideration of a denial of preauthorization:~~
- ~~1. The date on which the request for reconsideration was received;~~
 - ~~2. Patient information, including date of injury, date of birth, payer claim number and Commission claim number;~~
 - ~~3. The date on which an IME was completed, if applicable;~~
 - ~~4. A statement of what has been authorized including, if applicable, a partial authorization;~~
 - ~~5. A statement of explanation if the request for treatment is denied, in whole or in part; and~~

6. A statement of the process under which a provider or injured employee may request Commission review of the payer's denial, in whole or in part, of a request for preauthorization, which shall include the following information:

a. For a reconsideration decision that is issued without obtaining an IME:

"If you disagree with this reconsideration decision and wish to request review by the Commission, then you may submit a request for administrative review under R20-5-1311 to:

Industrial Commission of Arizona

Attn: Medical Resource Office

Commission Address

Commission Telephone Number:

The provider shall file this request promptly and include the following information: patient information, including name, address, payer claim number, Commission claim number, and date of injury; diagnosis or ICD code; employer, insurance carrier or TPA information; provider information; information pertaining to request for treatment, including the justification for treatment; applicable treatment guideline and denial of treatment by payer; copies of relevant medical information or records; copies of relevant documentation related to the payer reconsideration decision; and whether the request for medical treatment or services involves a request for urgent care or a life-threatening condition."

b. For reconsideration of a decision that is supported by an IME:

"If you disagree with this reconsideration decision and wish review by the Commission, then the injured employee is required to file a request for investigation under A.R.S. § 23-1061(J)."

~~F.E.~~ A payer shall provide a copy of its written reconsideration decision to deny treatment or services to the injured employee or, if represented, to the injured employee's authorized representative.

R20-5-1311. Administrative Review by Commission

A. ~~Until Absent~~ further action of the Commission under R20-5-1301(C), administrative review under this Article is ~~limited to~~ available for requests for medical treatment or services related to ~~the management of chronic pain and the use of opioids for all stages of pain management~~ all body parts and conditions.

B. A request for administrative review shall be in writing using Section V (Provider or Employee Request for Administrative Peer Review) of the Medical Treatment Preauthorization Form approved by the Commission under R20-5-106(A)(12). A request for administrative review must attach copies of relevant medical information or records and copies of all documentation related to the payer's decision or non-response. A request for administrative review must be ~~and~~ submitted to the Commission by mail, electronically or by fax. The request shall include the following information:

1. Identifying information of the injured employee and claim, including the injured employee's name, address, commission claim number, and date of injury;

2. Diagnosis and ICD code;

- ~~3. Identifying information of the employer, insurance carrier or TPA;~~
 - ~~4. Identifying information of the provider;~~
 - ~~5. Information pertaining to request for treatment, such as the justification for treatment, applicable treatment guideline and, if applicable, the payer's denial of treatment;~~
 - ~~6. Copies of relevant medical information or records;~~
 - ~~7. Copies of documentation related to the payer's decision or non-response; and~~
 - ~~8. Whether the request for medical treatment or services involves a request for urgent care or a life-threatening condition.~~
- C. Upon receipt of a request for administrative review, the Commission shall determine whether the administrative review is available under this Article.
 1. If administrative review is not available, then no later than three business days after receiving a request for administrative review, the Commission shall send notice to the injured employee and payer that administrative review is not available.
 2. If administrative review is available, then no later than three business days after receiving the request, the Commission shall send notice to the payer that a request for administrative review has been received and provide information on how to participate in the process.
 - D. The administrative review conducted under this Section shall apply the guidelines as described in this Article and include a peer review performed by an individual meeting the requirements of subsection (I). The peer review shall consist of a records review and, when possible as described in subsection (I)(5), a conversation between the provider and individual conducting the peer review.
 - E. The Commission may enter into an agreement with one or more contractors, who shall be URAC accredited, to provide the review described in subsection (D).
 - F. The payer shall pay for the costs of the peer review conducted by the contractor.
 - G. To assist in its review, the Commission or its contractor may request or receive additional information and documentation from the provider, injured employee or payer, who shall cooperate and provide the Commission or its contractor with any necessary medical information, including information pertaining to the payer's decision.
 - H. Before the Commission or its contractor issues a determination denying the request for treatment or services, a good faith effort shall be made to conduct a peer review with the provider requesting authorization to perform the treatment or services.
 - I. The individual conducting the peer review shall:
 1. Hold an active, unrestricted license or certification to practice medicine or a health profession and be involved in the active practice of medicine or a health profession during the five preceding years. For purposes of this subsection, "active practice" means performing patient care for a minimum of eight hours per week in one of the five preceding years;
 2. Be licensed in Arizona, unless the Commission or its contractor is unable to find such an individual, in

which case the peer review may be conducted by an individual who is licensed in another state of the United States and who meets the other requirements of this subsection;

3. For a review of a request from an allopathic or osteopathic physician, nurse practitioner, physician assistant, or other mid-level provider, hold a current certification from the American Board of Medical Specialties or the American Osteopathic Association in the area or areas appropriate to the condition, procedure or treatment under review;

4. Be in the same profession and the same specialty or subspecialty as typically performs or prescribes the medical procedure or treatment requested; and

5. Make a good faith effort to contact the provider requesting the preauthorization. This good faith effort shall include making telephone contact during the provider's normal business hours and offering to schedule the peer review at a time convenient for the provider.

J. A provider may bill the payer for time spent participating in a peer review under this Section.

K. The Commission or its contractor shall issue a written determination of its administrative review that contains the name and title of the person that performed the administrative review, and includes the following information:

1. Whether the request for treatment or services is authorized or denied, in whole or in part;
2. The information reviewed;
3. The principle reason for the decision; and
4. The clinical basis and rationale for the decision.

L. An interested party dissatisfied with the administrative review determination may request that the dispute be referred to the Commission's Administrative Law Judge Division for hearing. This request for hearing shall:

1. Be in writing;
2. Filed no later than 10 business days after the administrative review determination is issued; and
3. State whether the party requests to participate in the Fast Track ALJ Dispute Resolution Program by stipulation, or declines to participate in the Fast Track ALJ Dispute Resolution Program.

M. If a timely request for hearing is filed, the administrative review determination is deemed null and void and shall serve no evidentiary purpose.

N. The information provided by the parties under this Section and the determination issued by the Commission shall become a part of the Commission claims file for the injured employee.

From: [Grass, Melissa](#)
To: [Jason Porter](#)
Cc: [Kendall, Mark](#)
Subject: CopperPoint's written comments regarding Proposed Rulemaking (Streamlining Authorization Process/Expansion of Applicability of ODG)
Date: Wednesday, April 04, 2018 2:51:04 PM
Attachments: [image001.png](#)

The following email is being sent on behalf of Mark Kendall:

Mr. Porter,

Copperpoint Mutual Insurance Company ("Copperpoint") appreciates the opportunity to provide public comments on proposed rulemaking related to 1) streamlining the treatment guideline's authorization process, and 2) expanding the applicability of the Official Disability Guidelines ("ODG") to all body parts and conditions. Copperpoint supports the policy considerations undergirding these proposed rules and the proposed rulemaking intended to provide regulatory structure to these changes.

Rulemaking aimed at streamlining the process for authorizing treatment is both responsive to stakeholder concerns regarding this process and is consistent with Section 5 of SB 1332 passed by the Arizona Legislature in 2017. Upon passage of SB 1332, the Commission engaged in a comprehensive review process that included analysis of existing procedures and recommendations for streamlining these processes. During this review, stakeholders were given the opportunity to offer suggestions and comments as to how to best streamline the authorization process. This review culminated in a public meeting in December of 2017, wherein the Commission adopted certain suggestions for improving this process.

On the merits, these measures are both reasonable and balanced. Mandating the use of a standardized Medical Treatment Pre-Authorization Form is reasonably anticipated to make the authorization process easier and quicker for providers, payers, and the Commission. It will address concerns related to incomplete information and will improve payers' ability to identify requests for treatment that might be delivered in less conspicuous documentation (medical reports, etc.). Correspondingly, mandated use of the form justifies a diminution in the number of days a payer has to take action on a request for treatment (10 business days to 7 business days). Taken together, these provisions complement one another and should result in a speedier and more efficient process.

CopperPoint similarly supports rulemaking expanding applicability of the ODG to all conditions and body parts. This rulemaking is consistent with the legislative intent of A.R.S. § 23-1062.03 (passed in 2012) directing use of evidence based treatment guidelines in workers' compensation. This expansion follows an extended trial period wherein the ODG was applicable only to treatment of chronic pain and the use of opioids to treat pain. This trial period was appropriate in order to allow all interested parties to become familiar with the

ODG. However, it is time to move forward with expansion of the guidelines. The proposed rulemaking is both concise and clear in effectuating this change. Further, it should be noted that the delayed implementation to October 1, 2018 should give all interested parties additional time to adjust to these changes.

CopperPoint supports the rulemaking proposed to help implement both the streamlining of the authorization process and the expansion of applicability of the ODG. This rulemaking is occurring as part of an ongoing process that has been characterized by ample opportunity for stakeholder input. Further, the proposed rules themselves are both appropriate and efficient with respect to carrying out these mandates. CopperPoint appreciates being included in the ongoing stakeholder process.

Thank you,

Mark A. Kendall

Associate General Counsel

T: 602.631.2177 | F: 602.631.2188

mkendall@copperpoint.com



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BEFORE THE INDUSTRIAL COMMISSION OF ARIZONA

PUBLIC HEARING
ORAL PROCEEDING REGARDING ARTICLE 1 and 13
PROPOSED RULEMAKING
OFFICIAL DISABILITY GUIDELINES

Phoenix, Arizona
April 16, 2018
9:00 a.m.

APPEARANCES :

James Ashley, Director
Jason M. Porter, Chief Legal Counsel
Jacqueline L. Kurth, Manager of the Medical Resource Office

PREPARED BY:
Vicki L. O'Ceallaigh Champion, CCR
Certified Reporter
Certificate No. 50534

(Original)

Perfecta Reporting
(602) 421-3602

Phoenix, Arizona
April 16, 2018
9:00 a.m.

P R O C E E D I N G S

08:54:52

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MR. PORTER: Good morning. We have reached the 9:00 hour, so we are going to go ahead and get started.

09:01:59

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Thank you for attending today. We are here for the Public Comment Proceeding concerning the Industrial Commission's Notice of Proposed Rulemaking published in the Arizona Register on March 16, 2018.

09:02:29

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The Rulemaking pertains to Rule 20-5-106, -1301, -1302, -1303, -1309, -1310, and -1311. Copies of the Proposed Rulemaking are available on the table just outside of the entrance to the auditorium. Also available are copies of the Draft Medical Treatment Preauthorization Form with instructions.

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My name is Jason Porter. I am the Chief Legal Counsel for the Industrial Commission, and with me is Jackie Kurth, the Manager of the Medical Resource Office. The Proposed Rulemaking seeks to formalize Commission actions that were taken during Calendar Year 2017.

09:02:59

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We now welcome you to present your oral comments regarding the Proposed Rulemaking. Those wishing to speak may do so by filling out a speaker slip, which are also available just outside the door. I will call each speaker,

1 who will have approximately five minutes to speak, although
2 we do have few numbers, so if you would like to take more
3 time than that, you are certainly welcome to. I do have one
4 speaker slip, so if anyone else would like to speak, you can
5 bring up a speaker slip.

6 Our first speaker will be Gale Vogler, Director at
7 Copperpoint Insurance Company.

09:03:32

8 MR. VOGLER: Good morning, and thanks for giving us
9 the opportunity to speak. Copperpoint Mutual Insurance
10 Company appreciates the opportunity to provide public
11 comments on the Proposed Rulemaking related to streamlining
12 the Treatment Guidelines Authorization Process as well as
13 expanding the applicability of ODG to all body parts and
14 conditions.

09:03:55

15 Copperpoint supports the proposed rules and
16 rulemaking intended to provide regulatory structure.
17 Mandating the standardized treatment preauthorization forms
18 is reasonable, and we anticipate that it will make the
19 authorization process easier for all involved parties. We
20 support the reduction in response time from 10 days to 7 days
21 in conjunction with the use of the mandated form.

09:04:27

22 Copperpoint also supports the expansion of ODG to
23 all conditions and body parts. This rulemaking is consistent
24 with legislative intent passed back in 2012. The expansion
25 of ODG follows an extended trial period when ODG was applied

1 to only chronic pain and opioid use. The trial period has
2 allowed, in our opinion, all parties ample time to become
3 familiar with that process, and in closing, we support the
4 process.

5 MR. PORTER: Thank you very much for your comments.

09:05:00

6 With that, I have no other speaker slips. If anyone
7 else would like to speak, you are welcome to fill out a
8 speaker slip. If there is no one else, we are going to wait
9 approximately 10 to 15 minutes just to see if anyone else
10 decides to attend the meeting.

11 (Off the record.)

09:17:04

12 MR. PORTER: Do we have anyone else that would like
13 to comment?

14 All right. Well, then this will conclude the oral
15 proceeding regarding the Industrial Commission's Notice of
16 Proposed Rulemaking published in the Arizona Register on
17 March 16, 2018.

18 As a reminder for those present, although the oral
19 proceeding has concluded, written comments on the Proposed
20 Rulemaking will be accepted through the close of business
21 today. Thank you very much.

22 (WHEREUPON, the proceedings concluded at
23 9:17 a.m.)

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I HEREBY CERTIFY that the proceedings had upon the foregoing hearing are contained in the shorthand record made by me thereof, and that the foregoing 4 pages constitute a full, true, and correct transcript of said shorthand record, all done to the best of my skill and ability.

DATED at Phoenix, Arizona, this 16th day of April, 2018.


VICKI L. O'CEALLAIGH CHAMPION
CR No. 50534

ECONOMIC, SMALL BUSINESS, AND CONSUMER IMPACT STATEMENT

TITLE 20. COMMERCE, FINANCIAL INSTITUTIONS, AND INSURANCE

CHAPTER 5. INDUSTRIAL COMMISSION OF ARIZONA

**ARTICLE 1. WORKERS' COMPENSATION PRACTICE AND
PROCEDURE; ARTICLE 13. TREATMENT GUIDELINES**

1. Identification of the proposed rulemaking:

In 2012, the Arizona Legislature directed the Industrial Commission of Arizona (the "Commission") to "develop and implement a process for the use of evidence-based treatment guidelines, where appropriate, to treat injured workers." See A.R.S. § 23-1062.03. With significant stakeholder input, the Commission promulgated twelve rules, published in Title 20, Chapter 5, Article 13 of the Arizona Administrative Code ("Article 13" or the "Treatment Guidelines"). Among other things, the Treatment Guidelines: (1) prescribe the use of evidence-based treatment guidelines as a tool to support clinical decision making and quality health care delivery to injured workers within Arizona's workers' compensation system; (2) adopted Work Loss Data Institute's *Official Disability Guidelines – Treatment in Workers Compensation* (the "*Official Disability Guidelines*") as the standard reference for evidence-based medicine; (3) until further action of the Commission, limited the applicability of the *Official Disability Guidelines* to the management of chronic pain and the use of opioids for all stages of pain management; (4) outlined an administrative process for the Commission to modify the applicability of the *Official Disability Guidelines*; (5) outlined a noncompulsory process for a medical provider or injured worker to seek preauthorization from a payer for medical services or treatment; (6) established an administrative review process to help resolve disputes between medical providers, injured workers, and payers; and (7) outlined procedures for bringing unresolved disputes to the Commission for administrative hearing.

Streamlining the Treatment Guidelines' Authorization Process

In 2017, the Arizona Legislature (in Laws 2017, Ch. 287, § 5) directed the Commission to "review and determine a process for streamlining the authorization process for treatment that is within the evidence-based treatment guidelines." The Legislature required the Commission to complete the review process on or before December 31, 2017.

Consequently, on June 29, 2017, the Commission directed its Medical Resource Office to: (1) conduct a review of the existing authorization process under the Treatment Guidelines; and (2) make a recommendation to the Commission regarding “streamlining the authorization process for treatment that is within the evidence-based treatment guidelines.” Stakeholders were provided opportunities to offer suggestions and comments regarding streamlining the authorization process, including during a public hearing conducted on August 17, 2017. At its December 14, 2017 public meeting, the Commission completed its review of the existing authorization process. Based upon suggestions submitted by interested stakeholders, the Commission approved the following methods for streamlining the Article 13 authorization process:

1. Develop and mandate the use of a Medical Treatment Preauthorization Form with accompanying instructions; and
2. Reduce the time period within which a payer must respond to requests for preauthorization or reconsideration from ten business days to seven business days.

Modifying the Applicability of the *Official Disability Guidelines*

In addition to efforts to streamline the Treatment Guidelines, the Commission carefully studied the propriety of modifying the applicability of the *Official Disability Guidelines* pursuant to A.R.S. § 23-1062.03 and A.A.C. R20-5-1301(C). Under A.A.C. R20-5-1301(B), absent further action of the Commission, the *Official Disability Guidelines* only applied to the management of chronic pain and the use of opioids for all stages of pain management. Under R20-5-1301(C), however, the Commission was authorized to “modify or change the applicability of the guidelines” if the Commission determined that modification or changing the applicability of the guidelines would: (1) improve medical treatment for injured workers; (2) make treatment and claims processing more efficient and cost effective; and (3) the guidelines adequately cover the relevant body parts or conditions.

On June 29, 2017, the Commission directed its Medical Resource Office to conduct an investigation and study regarding the three modification criteria. Consistent with the procedural requirements of R20-5-1301(C), the Commission publicly posted study materials and provided an opportunity for public comment. The Commission conducted a public hearing on November 30, 2017.

On December 21, 2017, following an evaluation of the study materials and stakeholder feedback, the Commission determined (at a public Commission meeting) that modifying the applicability of the *Official Disability Guidelines* to cover all body parts and conditions would improve medical treatment for injured workers and would make treatment and claims processing more efficient and cost effective. In addition, based upon written reviews received from board-certified physicians in Arizona (representing various specialties), the Commission determined that the *Official Disability Guidelines* adequately cover all body parts and conditions. Based on these determinations, the Commission took formal action to modify the applicability of the *Official Disability Guidelines* to all body parts and conditions, effective October 1, 2018.

The subject rulemaking described herein formalizes the Commission's actions, outlined above, and includes the following:

- Amends R20-5-106 (“Commission Forms”) to describe and mandate the use of the Medical Treatment Preauthorization Form.
- Amends R20-5-1301 (“Adoption and Applicability of the Article”) and R20-5-1311 (“Administrative Review by Commission”) to reflect the Commission’s December 21, 2017 decision to modify the applicability of the *Official Disability Guidelines* to apply to all body parts and conditions and to state applicable effective dates. (Note: This rulemaking is non- substantive, as the Commission already completed the substantive process for modifying the applicability of the Official Disability Guidelines under R20-5-1301(C).)
- Amends R20-5-1303 (“Provider Request for Preauthorization”); R20-5-1309 (“Payer Decision on Request for Preauthorization”); R20-5-1310 (“Payer Reconsideration on Request for Preauthorization”); and R20-5-1311 (“Administrative Review by Commission”) to: (1) mandate the use of the Medical Treatment Preauthorization Form; (2) reduce the time period for a payer to respond to a request for preauthorization or reconsideration from ten business days to seven business days; (3) remove pre-existing requirements for a request for preauthorization, a decision on a request for preauthorization, a decision on a request for reconsideration, and a request for administrative review; and (4) provide that a payer’s decision on a request for preauthorization or reconsideration may be

provided to the injured worker’s authorized representative.

- Amends R20-5-1309 (“Provider Decision on Request for Preauthorization”) to require that a payer who receives a deficient request for preauthorization – either because it is incomplete or not submitted using the Medical Treatment Preauthorization Form – must, within seven business days of receiving and identifying the deficient request, either: (1) act on the deficient request by using the Medical Treatment Preauthorization Form; or (2) notify the provider making the request that a request for preauthorization must be submitted on the Medical Treatment Preauthorization Form.

2. Identification of the persons who will be directly affected by, bear the costs of, or directly benefit from the proposed rulemaking:

Modifying the Applicability of the *Official Disability Guidelines*

The amendments related to modification of the applicability of the *Official Disability Guidelines* are non-substantive, as the rulemaking is merely intended to update Article 13 to reflect formal action taken by the Commission pursuant to A.A.C. R20-5-1301(C). Therefore, the subject rulemaking related to modification of the applicability of the *Official Disability Guidelines* creates no economic, small business, or consumer impact beyond that already created by Article 13 and the Commission’s formal action taken on December 21, 2017.

Streamlining the Treatment Guidelines’ Authorization Process

The Commission anticipates that the amendments related to streamlining the authorization process contained in Article 13 will impact participants in the workers’ compensation system. Participants include injured employees who receive medical treatment and/or services related to industrial injuries, medical providers who treat injured workers, and payers (insurance carriers, self-insured employers, and the Commission’s Special Fund) who administer workers’ compensation claims. Although participants in the workers’ compensation system are already subject to the Treatment Guidelines, the subject rulemaking includes the following:

- Mandates the use of the “Medical Treatment Preauthorization Form” (the “Form”) when a medical provider seeks preauthorization for medical treatment or services. Although preauthorization *is not required* under the Treatment Guidelines, *see*

A.A.C. R20-5-1303(A), a medical provider choosing to seek preauthorization will be required to use the Form, which will include fields for all necessary information. The Commission anticipates that the mandated Form will: (1) make it faster and easier for medical providers/injured employees to seek preauthorization, reconsideration, and/or Commission review; (2) streamline the preauthorization process by reducing the volume of deficient requests for preauthorization, reconsideration, or Commission review; (3) make it easier for payers to identify, and promptly act upon, requests for preauthorization and reconsideration; and (4) reduce unnecessary delays in providing injured employees with reasonably-required medical treatment.

- Reduces the time period for a payer to respond to a request for preauthorization or reconsideration from ten business days to seven business days. Although the condensed time period will require payers to process requests for preauthorization and reconsideration in a quicker manner (three days faster), the Commission anticipates that the condensed time period will: (1) reduce unnecessary delays in providing injured employees with reasonably-required medical treatment; and (2) streamline the preauthorization process by permitting interested parties to progress through the authorization process in an accelerated manner.
- Requires a payer who receives an incomplete request for preauthorization or a request for preauthorization that is not submitted on the Medical Treatment Preauthorization Form to, within seven business days of receiving and identifying the deficient request, either: (1) act on the deficient request by using the Medical Treatment Preauthorization Form; or (2) notify the provider making the request that a request for preauthorization must be submitted on the Medical Treatment Preauthorization Form. This amendment will offer payers necessary flexibility in acting upon deficient requests for preauthorization, while preventing deficient requests from being disregarded. The Commission anticipates that the amendment will ultimately: (1) reduce the volume of deficient requests for preauthorization; (2) reduce unnecessary delays in providing injured employees with reasonably-required medical treatment; and (3) improve the processing of workers' compensation claims.

In summary, the Commission anticipates that the amendments will primarily benefit participants in Arizona's workers' compensation system by streamlining the authorization process, reducing delays in providing injured employees with reasonably-required medical treatment, improving the processing of workers' compensation claims, and reducing litigation time and costs. The subject rulemaking will not result in any costs to injured employees.

3. A cost benefit analysis of the following:

- (a) Costs and benefits to state agencies directly affected by the rulemaking, including the number of new full-time employees at the implementing agency required to implement and enforce the proposed rule:

Modifying the Applicability of the *Official Disability Guidelines*

The amendments related to modification of the applicability of the *Official Disability Guidelines* are non-substantive, as the rulemaking is merely intended to update Article 13 to reflect formal action taken by the Commission pursuant to A.A.C. R20-5-1301(C). Therefore, the subject rulemaking related to modification of the applicability of the *Official Disability Guidelines* imposes no costs or benefits on state agencies beyond that already created by Article 13 and the Commission's formal action taken on December 21, 2017.

Streamlining the Treatment Guidelines' Authorization Process

As a self-insuring payer in Arizona's workers' compensation system, the State of Arizona (through the Arizona Department of Administration-Risk Management Division) will be subject to the costs and benefits of the rulemaking. *See supra* Section 2. Although the costs to the State of Arizona (through the Arizona Department of Administration-Risk Management Division) will not be significant, the Commission anticipates that the amendments will streamline the authorization process for medical services for state employees, reduce delays in providing state employees with reasonably-required medical treatment, improve the state's processing of workers' compensation claims, and reduce litigation time and costs. The Commission does not anticipate that the Arizona Department of Administration-Risk Management Division will need to hire any new full-time employees to implement the subject rulemaking.

(b) Costs and benefits to political subdivisions directly affected by the rulemaking; and

The proposed rulemaking directly applies to self-insuring political subdivisions. For further discussion regarding the anticipated costs and benefits to self-insuring payers in Arizona's workers' compensation system, *see supra* Sections 2 & 3(a).

(c) Costs and benefits to businesses directly affected by the rulemaking:

The proposed rulemaking directly applies to participants in the workers' compensation system, including medical providers who treat injured workers and payers (insurance carriers, self-insured employers, and the Commission's Special Fund) who administer workers' compensation claims. For further discussion regarding the anticipated costs and benefits to participants in Arizona's workers' compensation system, including medical providers or payers, *see supra* Section 2.

4. Impact on private and public employment in businesses, agencies and political subdivisions:

The Commission does not anticipate that the subject rulemaking will have any direct impact on private and public employment in businesses, agencies, and political subdivisions.

5. Impact on small businesses:

(a) Identification of the small businesses subject to the rulemaking:

The proposed rulemaking applies to all participants in the workers' compensation system, including medical providers who treat injured workers and payers (insurance carriers, self-insured employers, and the Commission's Special Fund) who administer workers' compensation claims. Although a small subset of these participants may operate small businesses, the subject rulemaking does not target small businesses.

(b) Administrative and other costs required for compliance with the rulemaking:

The proposed rulemaking is not intended to impose new obligations, costs, or time constraints on small businesses. Instead, the proposed rules are intended to streamline the Treatment Guidelines' preauthorization process for all participants. *See supra* Section 2.

(c) Description of the methods that may be used to reduce the impact on small businesses:

The proposed rulemaking is not intended to impose new obligations, costs, or time constraints on small businesses. Instead, the proposed rules are intended to streamline the Treatment Guidelines' preauthorization process for all participants. *See supra* Section 2.

(d) Cost and benefit to private persons and consumers who are directly affected by proposed rulemaking:

See supra Section 2 (discussing anticipated costs and benefits to participants in Arizona's workers' compensation system).

6. Probable effect on state revenues:

The Commission does not anticipate that the proposed rules will have any direct effect on state revenues.

7. Less intrusive or less costly alternative methods considered:

Because the subject rulemaking will primarily benefit participants in Arizona's workers' compensation system, the Commission did not consider less costly alternative methods. *See supra* Section 2.

8. Data on which the rule is based:

Modifying the Applicability of the Official Disability Guidelines

The subject rulemaking related to the *Official Disability Guidelines* is merely intended to update Article 13 to reflect the formal action taken by the Commission on December 21, 2017, pursuant to A.A.C. R20-5-1301(C). Consequently, the Commission has not reviewed and is not relying upon any data or study in its evaluation of or justification for the subject rulemaking as it related to modifying the applicability to the *Official Disability Guidelines*.

As concerns the Commission's December 21, 2017 action, the Commission considered various study materials prior to completing the regulatory process for modifying the applicability of the Official Disability Guidelines. The study materials considered by the Commission during the administrative process are available at <https://www.azica.gov/official-disability-guidelines-study-materials-and-public-comments>. The study materials are also available for inspection or reproduction at the Industrial Commission of Arizona, Medical Resource Office, 800 West Washington Street, Phoenix, Arizona 85007.

Streamlining the Treatment Guidelines' Authorization Process

The Commission has not reviewed and is not relying upon any data or study in its evaluation of or justification for the subject rulemaking relating to streamlining the Treatment Guidelines' authorization process.

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- D. A person upon whom a motion to join is filed under this Article may file a response to the motion within 10 days after the motion is filed.
- E. The Commission shall not consider a discovery motion unless the moving party attaches a separate statement to the discovery motion certifying that after good faith efforts to do so, the moving party has been unable to satisfactorily resolve the matter giving rise to the discovery motion with the opposing party.

Historical Note

Former Rule 5. Amended effective March 1, 1987, filed February 26, 1987 (Supp. 87-1). R20-5-105 recodified from R4-13-105 (Supp. 95-1). Section repealed; new Section made by final rulemaking at 7 A.A.R. 3966 and 7 A.A.R. 4995, effective August 17, 2001 (Supp. 01-3).

R20-5-106. Commission Forms**A.** The following forms shall be used when applicable:

1. Employer's report of industrial injury (form 101) shall contain:
 - a. Employee, employer, and carrier identification;
 - b. Description of employment;
 - c. Description of accident and injury;
 - d. Description of medical treatment received by employee;
 - e. Employee's wage data;
 - f. Date, signature, and title of employer or the employer's representative; and
 - g. Statement doubting the validity of the claim, if the employer doubts the validity of the claim.
2. The physician's portion of the worker's and physician's report of injury (form 102) shall contain:
 - a. Name and address of physician;
 - b. Information regarding preexisting conditions;
 - c. Information regarding the industrial injury, treatment, and prognosis;
 - d. Statement authorizing the attachment of a medical report that contains the information required in form 102; and
 - e. Physician's signature and date.
3. Notice of supportive medical benefits (form 103) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Description of authorized medical benefits;
 - c. Date the notice is mailed;
 - d. Name and telephone number of the individual issuing the notice; and
 - e. Statement regarding reopening and appeal rights including filing requirements.
4. Notice of claim status (form 104) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Status of the claim;
 - c. Date the notice is mailed;
 - d. Name and telephone number of the individual issuing the notice; and
 - e. Statement of a party's hearing and appeal rights including filing requirements.
5. Notice of suspension of benefits (form 105) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Effective date of the suspension;
 - c. Reasons for the suspension;
 - d. Date the notice is mailed;
 - e. Name and telephone number of the individual issuing the notice; and
6. Notice of permanent disability or death benefits (form 106) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Applicable statutory authority under which compensation is paid;
 - c. Disability and compensation information;
 - d. Date the notice is mailed;
 - e. Name and telephone number of the individual issuing the notice; and
 - f. Statement regarding hearing and appeal rights including filing requirements.
7. Notice of permanent disability and request for determination of benefits (form 107) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Type of disability;
 - c. Applicable statutory authority for designated disability;
 - d. Designation of dependents where death is involved;
 - e. Designation of advanced payments and amount of the advance;
 - f. Date the notice is mailed; and
 - g. Name and telephone number of the individual issuing the notice.
8. Carrier's recommended average monthly wage calculation (form 108) shall contain:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Employment and wage history;
 - c. Designation of dependents; and
 - d. Carrier's calculations for the recommended average monthly wage and the basis for the calculation.
9. Notice of permanent compensation payment plan (form 111) shall contain:
 - a. Employee, employer, and carrier identification;
 - b. Amount of permanent compensation and description of payment plan;
 - c. Name of the responsible entity contracted by the carrier to administer the payment plan;
 - d. Statement that the carrier remains the responsible party for payment;
 - e. Statement regarding supportive care and reopening rights;
 - f. Date the notice is mailed; and
 - g. Name and telephone number of the individual issuing the notice.
10. Report of insurance coverage (form 0006) shall contain:
 - a. Name and address of the carrier;
 - b. Legal name of entity that the carrier insures;
 - c. All other insured names or subsidiary entities under which the carrier's insured does business in Arizona;
 - d. Address of all insured entities with insurance policy information for each address; and
 - e. Employer Identification Number (EIN), Taxpayer Identification Number (TIN), or Federal Identification Number (FIN) assigned to each insured person or entity.
11. Report of significant work exposure to bodily fluids or other infectious material shall contain:
 - a. The requirements set forth in A.R.S. §§ 23-1043.02(B), 23-1043.03(B), and 23-1043.04(B);
 - b. Employee identification,
 - c. Employer identification,

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- d. Source of exposure person identification (if known),
 - e. Details of the exposure including:
 - i. Date of exposure,
 - ii. Time of exposure,
 - iii. Place of exposure,
 - iv. How exposure occurred,
 - v. Type of bodily fluid or fluids,
 - vi. Source of bodily fluid or fluids,
 - vii. Part or parts of body exposed to bodily fluid or fluids,
 - viii. Presence of break or rupture in skin or mucous membrane, and
 - ix. Witnesses (if known), and
 - f. Dated signature of employee or the employee's authorized representative.
- B.** The following forms may be used:
1. The workers' portion of the worker's and physician's report of injury (form 102) requests:
 - a. Employee, employer, insurance carrier, and physician identification;
 - b. Description of the accident, including date of injury; and
 - c. Date and signature of the employee or the employee's authorized representative.
 2. Worker's report of injury (form 407) requests:
 - a. Employee and employer identification,
 - b. Job title,
 - c. Employment description,
 - d. Employee's wage data,
 - e. Date of injury,
 - f. Accident and injury descriptions,
 - g. Medical treatment information,
 - h. Information concerning prior injuries of the employee,
 - i. Disability income, and
 - j. Date and signature of the employee or the employee's authorized representative.
 3. Worker's annual report of income (form 110-A) requests:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Employment and wage history for the preceding 12 months;
 - c. Date and signature of the employee or the employee's authorized representative attesting to the truthfulness of the employment and wage information; and
 - d. Statement that failure to submit an annual report of income may result in a suspension of benefits by the carrier or self-insured employer.
 4. Notice of intent to suspend (form 110-B) requests:
 - a. Employee, employer, insurance carrier, and claim identification;
 - b. Employment and wage history for the preceding 12 months;
 - c. Date and signature of the employee or the employee's authorized representative attesting to the truthfulness of the employment and wage information;
 - d. Statement that failure to submit an annual report within 30 days of the date of the notice shall result in a suspension of benefits by the carrier or self-insured employer.
 5. Request for hearing requests:
 - a. Names of the employee, employer, and insurance carrier;
 - b. Claim identification;
 - c. Identification of the award, notice, order, or determination protested and reason(s) for the protest;
 - d. Estimated length of time for hearing and city or town in which hearing is requested;
 - e. Name and address of any witness for whom a subpoena is requested; and
 - f. Date and signature of party or the party's authorized representative.
 6. Petition to reopen requests:
 - a. Names of the employee, employer, and insurance carrier;
 - b. Claim identification;
 - c. Identification or description of the new, additional, or previously undiscovered temporary or permanent disability or medical condition justifying the reopening of the claim; and
 - d. Employee's medical and employment history.
 7. Petition for rearrangement or readjustment of compensation requests:
 - a. Names of the employee, employer, and insurance carrier;
 - b. Claim identification;
 - c. Income and employment history;
 - d. Medical history; and
 - e. Statement of the basis for the increase or decrease in earning capacity.
 8. Claim for dependent's benefits-fatality form requests:
 - a. Identification of dependent filing claim;
 - b. Identification of deceased;
 - c. Date of death;
 - d. Date of injury, if different than date of death;
 - e. Name and address of employer at time of deceased's death;
 - f. Statement of cause of death;
 - g. Names and addresses of health care providers rendering treatment to deceased in two years before death;
 - h. Conditions treated by health care providers in the two years before deceased's death;
 - i. If claim is for spousal benefits, the form requests:
 - i. Name, address, and date of birth of spouse;
 - ii. Copy of marriage certificate;
 - iii. Date and place of marriage to deceased;
 - iv. History of prior marriages of deceased and deceased's spouse, including copies of divorce decrees; and
 - v. Statement of living arrangements at time of deceased's death, including reason for living apart at time of death, if applicable;
 - j. If claim is for a dependent child, the form requests:
 - i. Name, date of birth, and address of child at time of deceased's death;
 - ii. List of children in care and custody of current spouse; and
 - iii. Statement of whether unborn child is expected and date expected;
 - k. If claim is for dependent other than a child, the form requests:
 - i. Name and address of other dependent,
 - ii. Relationship of other dependent to deceased, and
 - iii. Statement of the nature and extent of dependency; and
 - l. Date, telephone number, and signature of dependent or authorized representative of dependent.
 9. Request to leave the state form requests:

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- a. Employee, insurance carrier, and claim identification;
 - b. Reason for requesting to leave Arizona;
 - c. Dates leaving and returning to Arizona;
 - d. Out-of-state address;
 - e. Name and telephone number of attending physician; and
 - f. Date and signature of the employee or the employee's authorized representative.
10. Request to change doctors form requests:
- a. Employee, insurance carrier, and claim identification;
 - b. Reason for requesting change of doctor;
 - c. Name and phone number of claimant's current doctor;
 - d. Name and phone number of doctor claimant requests to change to; and
 - e. Date and signature of the employee or the employee's authorized representative.
11. Complaint of bad faith and unfair claim processing practices requests:
- a. Employee, employer, and insurance carrier identification;
 - b. Description of the alleged bad faith or unfair claim processing practices;
 - c. Date of the complaint; and
 - d. Name, address, and telephone number of the person signing the complaint.
12. Certification of employer's drug and alcohol testing policy requests:
- a. Employer's certification as described under A.R.S. § 23-1021(F),
 - b. Name and federal identification number of the employer, and
 - c. Name of all subsidiaries and locations of the employer.
- C. Optional use of a form described in subsection (B) does not affect any requirement under the Act or this Article.
- D. Forms or format for the forms described in this Section are available from the Commission.
- E. Forms prescribed under this Section shall not be changed, amended, or otherwise altered without the prior written approval of the Commission.

Historical Note

Former Rule 6. Amended effective March 1, 1987, filed February 26, 1987 (Supp. 87-1). Amended effective August 28, 1992 (Supp. 92-3). R20-5-106 recodified from R4-13-106 (Supp. 95-1). Amended by final rulemaking at 7 A.A.R. 3966 and 7 A.A.R. 4995, effective August 17, 2001 (Supp. 01-3). Amended by final rulemaking at 15 A.A.R. 991, effective June 2, 2009 (Supp. 09-2).

R20-5-107. Manner of Completion of Forms and Documents

- A. An individual completing a form or document shall fill out the form or document legibly in ink or by typewriter.
- B. A party or a party's authorized representative shall sign any form or document that is required by the Act, this Article, or other law to be signed.
- C. Unless otherwise provided in this Article, if a party is required to sign a form or document, the Commission shall not accept a typewritten name or stamped signature.
- D. If, within the time period prescribed by law, a party files an incomplete form or document, or files an instrument other than a form or document when a form or document is required, the Commission shall serve notice to the party that the form or

document fails to comply with this Section. The Commission deems the report or document timely filed if the party files a properly completed and signed form or document within 14 days after the Commission serves the notice described in this subsection.

Historical Note

Former Rule 7. Amended effective March 1, 1987, filed February 26, 1987 (Supp. 87-1). R20-5-107 recodified from R4-13-107 (Supp. 95-1). Amended by final rulemaking at 7 A.A.R. 3966 and 7 A.A.R. 4995, effective August 17, 2001 (Supp. 01-3).

R20-5-108. Confidentiality of a Commission Claims File; Reproduction and Inspection of a Commission Claims File

- A. Except as provided in this Section, a claims file maintained by the Commission is private and confidential and the Commission shall not make the claims file available for inspection and copying. For purposes of this Section, "claims file" means the official record maintained by the Commission for a claimant's industrial injury including the worker's report of injury, employer's report of injury, worker and physician's report of injury, and all other reports, records, instruments, videotapes, audiotapes, transcripts, and other matters scanned or otherwise placed into the file.
- B. Except as provided in subsections (D) and (E), the Commission shall make a Commission claims file relating to a current or prior claim of a claimant available for inspection and copying by any party to any proceeding currently or previously before the Commission involving the same claimant.
- C. Except as provided in subsections (D) and (E), the Commission shall not make a Commission claims file available to a non-party for inspection and copying unless the Commission receives a court order or written authorization signed by the affected claimant or the affected claimant's authorized representative.
- D. The Commission shall make a transcript contained in a Commission claims file available for inspection and copying if:
 1. The person requesting to inspect and copy the transcript is a person authorized under subsections (B) or (C); and
 2. The transcript concerns a hearing related to a claim that is not in litigation.
- E. The Commission shall make a transcript contained in a Commission claims file available only for inspection if:
 1. The person requesting to inspect and copy the transcript is a person authorized under subsections (B) or (C); and
 2. The transcript concerns a hearing related to a claim currently in litigation.
- F. The Commission shall provide copies at a charge of \$.25 per page.
- G. A Commission claims file shall not be removed from a Commission office unless in the custody of an authorized representative of the Commission.

Historical Note

Former Rule 8. Amended effective March 1, 1987, filed February 26, 1987 (Supp. 87-1). Amended effective August 28, 1992 (Supp. 92-3). R20-5-108 recodified from R4-13-108 (Supp. 95-1). Amended by final rulemaking at 7 A.A.R. 3966 and 7 A.A.R. 4995, effective August 17, 2001 (Supp. 01-3).

R20-5-109. Admission into Evidence of Documents Contained in a Commission Claims File

- A. If a party or an administrative law judge considers a document contained in a Commission claims file, including a transcript of a prior proceeding, necessary or appropriate for hearing purposes, the administrative law judge shall receive a copy of

effective July 17, 2007 for 180 days (Supp. 07-3). New Section made by final rulemaking at 13 A.A.R. 4315, effective January 13, 2008 (Supp. 07-4).

R20-5-1220. Small Employer Request for Exception to Recordkeeping Requirements

- A. In this Section, unless context otherwise requires, “small employer” means a corporation, proprietorship, partnership, joint venture, limited liability company, trust, or association that has less than \$500,000 in gross annual revenue.
- B. A small employer, or any category of small employer that is unreasonably burdened by the recordkeeping requirements of the Act and this Article may file a written petition for exception with the Department requesting relief from certain recordkeeping requirements under this Article. The petition shall:
1. State the reasons for the request for relief;
 2. State an alternate manner or method of making, keeping, and preserving records that will enable the Department to determine hours worked and wages paid; and
 3. Include the signature of the employer or an authorized representative of the employer.
- C. Subject to any conditions or limitations necessary to ensure fulfillment of the purpose and intent of Act, the Department may grant a petition for exception if it finds that:
1. The small employer, or category of small employer is unreasonably burdened by the recordkeeping requirements of the Act and this Article; and
 2. The relief requested and alternative proposed will not hinder the Department’s enforcement of the Act and this Article.
- D. For good cause, the Department may rescind a prior order granting relief under this Section.
- E. Relief under this Section is effective upon the Department’s written authorization.

Historical Note

New Section made by emergency rulemaking at 13 A.A.R. 473, effective January 25, 2007 for 180 days (Supp. 07-1). Emergency renewed at 13 A.A.R. 2785, effective July 17, 2007 for 180 days (Supp. 07-3). New Section made by final rulemaking at 13 A.A.R. 4315, effective January 13, 2008 (Supp. 07-4).

ARTICLE 13. TREATMENT GUIDELINES

R20-5-1301. Adoption and Applicability of the Article

- A. The Industrial Commission of Arizona (Commission) has adopted the Work Loss Data Institute’s *Official Disability Guidelines – Treatment in Workers Compensation (ODG)* as the standard reference for evidence-based medicine used in treating injured workers within the context of Arizona’s workers’ compensation system. By adopting and referencing the most recent edition (at the time of treatment), and continuously updated *Official Disability Guidelines*, the Commission can ensure the latest available medical evidence is used in making medical treatment decisions for injured workers.
- B. Until further action of the Commission, the guidelines shall apply to the management of chronic pain and the use of opioids for all stages of pain management. For purposes of this process, chronic pain shall be defined by the guidelines.
- C. The Commission may modify or change the applicability of the guidelines as described in subsection (B) if the Commission determines that modification or changing the applicability of the guidelines will: 1) improve medical treatment for injured workers, 2) make treatment and claims processing more efficient and cost effective, and 3) the guidelines adequately cover the body parts or conditions. Before taking action to modify or change the applicability of the guidelines,

the Commission shall provide an opportunity for public comment and hold a public hearing. A decision of the Commission under this subsection shall be made by a majority vote of a quorum of Commission members present at a public meeting.

- D. Action taken by the Commission to modify or change the applicability of the guidelines under subsection (C) shall be published in the minutes of the Commission meeting when such action was taken. The minutes of this action shall be published on the Commission’s website and shall be available from the Commission upon request.
- E. The guidelines shall apply prospectively. Recommendations provided in the guidelines shall apply to medical treatment or services occurring on or after the effective date of this Article.
- F. This Article applies to all claims filed with the Commission.
- G. This Article only applies to medical treatment and services for body parts and conditions that have been accepted as compensable.
- H. The guidelines are to be used as a tool to support clinical decision making and quality health care delivery to injured employees. The guidelines set forth care that is generally considered reasonable and are presumed correct if the guidelines provide recommendations related to the requested treatment or service. This is a rebuttable presumption and reasonable medical care may include deviations from the guidelines. To support a request to deviate from the guidelines, the provider must produce documentation and justification that demonstrates by a preponderance of credible medical evidence a medical basis for departing from the guidelines. Credible medical evidence may include clinical expertise and judgment.
- I. The Commission shall provide administrative review and oversight of this Article.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1302. Definitions

In this Article, unless the context otherwise requires:

“Act” means the Arizona Workers’ Compensation Act, A.R.S. Title 23, Ch. 6, Articles 1 through 11.

“Active Practice” means performing patient care for a minimum of eight hours per week in one of the five preceding years.

“Administrative Law Judge” or “ALJ” means a hearing officer appointed under A.R.S. § 23-108.02.

“Administrative Review” means a process that includes a peer review for preauthorization of a request for medical treatment or services that has been denied or partially denied by a payer. The administrative review process will be managed by the Medical Resource Office (MRO) at the Industrial Commission of Arizona.

“American Board of Medical Specialties” means the organization that develops a uniform system for specialty boards to administer examinations for certification of physicians within specific medicine specialties.

“American Osteopathic Association” means the organization that develops a uniform system for specialty boards to administer examinations for certification of osteopathic physicians within specific osteopathic medicine specialties.

“Applicability” means the medical conditions that are covered under this Article and authorized by the Commission under R20-5-1301(B) and (C).

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“Claim” means the workers’ compensation claim filed by the injured employee under the Act.

“Contractor” means an independent peer review organization accredited by URAC.

“Fast Track ALJ Dispute Resolution Program” or “fast track process” means the voluntary dispute resolution process set forth in R20-5-1312(B).

“International Classification of Diseases Code” or “ICD Code” means a set of medical diagnostic codes that creates a universal language for reporting diseases and injury.

“International Classification of Diseases” or “ICD” means an official list of categories of diseases, physical and mental, that is issued and maintained by the World Health Organization.

“IME” means an independent medical examination scheduled under R20-5-114.

“Injured Employee” means a person defined in A.R.S. § 23-901 whose claim has been accepted for workers’ compensation benefits.

“Medical File Review Opinions” means a formal examination of patient data and medical records for the purpose of determining the need for medical treatment, services or both.

“Payer” means an insurance carrier defined under A.R.S. § 23-901, a self-insured employer defined in R20-5-102, a third-party administrator, and the Special Fund of the Industrial Commission of Arizona.

“Peer Review” means an independent medical review conducted by an individual meeting the requirements of R20-5-1311(I).

“Preauthorization” means a request from a provider to a payer requesting approval to provide medical treatment or services to an injured employee.

“Provider” means a physician as defined in R20-5-102.

“Reconsideration” means a written request to the payer or identified review organization by an injured employee or medical provider to reconsider a previous payer decision to deny medical treatment or services and that identifies the specific justification to support the request.

“Third-Party Administrator” or “TPA” means an organization that processes insurance or employee benefit claims for a separate entity.

“Treatment Guidelines” or “guidelines” means medical treatment guidelines that are used as a tool to support clinical decision making and quality health care delivery to injured employees.

“URAC” refers to URAC, a non-profit organization formerly known as the Utilization Review Accreditation Commission.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1303. Provider Request for Preauthorization

- A. No preauthorization is required under the Act to ensure payment for reasonably required medical treatment or services. While preauthorization is not required under the Act, a provider may seek preauthorization as provided in this subsection.
- B. A provider shall submit a request for preauthorization in writing, which shall include the following information:
 1. Patient information (including date of injury, date of birth, and payer claim number);

2. Diagnosis and ICD code;
 3. Date of request;
 4. Type of request - Initial, Routine, Urgent, or Life Threatening;
 5. A statement of the treatment or services requested. Where appropriate, information about quantity, strength, duration and frequency of the treatment or services should be included. Use of the applicable codes should also be included and will facilitate the process; and
 6. Documentation, if not already provided, that supports the medical necessity and appropriateness of the treatment or services requested, such as office notes and diagnostic reports.
- C. A provider may submit the request by mail, electronically or by fax.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1304. Payer Denial of Request for Preauthorization

- A. A payer shall not deny a request for preauthorization solely because the guidelines do not address the requested treatment or services.
- B. A payer shall not deny a request for preauthorization that is supported by the guidelines, unless the payer can rebut the presumption of reasonableness and correctness with a medical or psychological opinion establishing by a preponderance of the evidence that there is a contraindication or significant medical or psychological reason not to authorize the requested treatment or services. Upon request by the provider or injured employee, a denial of preauthorization in this situation shall be processed as an immediate referral to the Commission for administrative review as provided in R20-5-1311 unless the payer obtains an IME in support of its denial. If the payer obtains an IME which serves as the basis for the denial, then review of the payer’s decision shall be processed as a request for investigation under A.R.S. § 23-1061(J) if filed by the injured employee.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1305. Payer Denial of Payment for Provided Treatment or Services

- A. A payer shall not deny payment for provided treatment or services solely because the guidelines do not address the requested treatment or services.
- B. A payer shall not deny payment for provided treatment or services supported by the guidelines, unless the payer can rebut the presumption of reasonableness and correctness with a medical or psychological opinion establishing by a preponderance of the evidence that there is a medical contraindication or significant medical or psychological reason not to pay for the treatment or services.
- C. A dispute related to a payer’s failure to pay for provided treatment or services may be processed as a request for investigation under A.R.S. § 23-1061(J) if filed by an injured employee.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1306. Payer Reversal of Decision to Deny Treatment or Services

A payer may reverse its decision to deny treatment or services at any time throughout the process described in this Article. In this sit-

uation, the payer's subsequent authorization or agreement to pay for the treatment or services at issue shall end this process.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1307. Payer Decision, In Whole or In Part

A payer may issue a decision approving or denying a request for preauthorization in whole, or in part.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1308. Failure to Comply with Required Time Limits

A payer's failure to comply with the required time limits of this process may be considered unreasonable delay under R20-5-163.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1309. Payer Decision on Request for Preauthorization

- A. Except as provided in subsection (D), a payer shall communicate to the provider its decision on a request for preauthorization no later than 10 business days after the request is received. This decision shall comply with the requirements set forth in subsection (H). For purposes of this Section, the 10 business days begin to run the day after the payer receives the request.
- B. If a payer fails to communicate to a provider its decision on request for preauthorization within 10 business days, then the payer's failure to take action is deemed a "no response" and the provider or injured employee may submit a request for administrative review directly to the Commission as provided in R20-5-1311.
- C. If a payer receives a request for preauthorization that fails to meet the requirements of R20-5-1303, the payer may, in its discretion:
 - 1. Act on the incomplete request for preauthorization; or
 - 2. No later than 10 business days after the request is received, notify the provider that the request for preauthorization is incomplete.
- D. If, no later than 10 business days after a request for preauthorization has been received, a payer provides notice to the provider that an IME has been requested under R20-5-114, then the payer's decision on a request for preauthorization shall be issued no later than 10 business days after the final IME report has been received by the payer. The payer shall provide a copy of the final IME report to the provider upon receipt of the IME report.
- E. Unless the payer decision was supported by an IME or otherwise falls within subsection R20-5-1304(B), an injured employee or provider may seek reconsideration of a payer decision by submitting a written request to the payer (or review organization identified by the payer) that states the specific reasons and justifications to support the request. If not previously provided, the injured employee or provider shall include supporting medical documentation with their written request.
- F. An injured employee may seek review of a payer decision that is supported by an IME by requesting an investigation under A.R.S. § 23-1061(J).
- G. Unless the decision was supported by an IME, an injured employee or provider may seek review of a payer decision issued under R20-5-1304(B) by requesting administrative review by the Commission as provided in R20-5-1311.

- H. A payer shall include the following information in its written decision to approve or deny, in whole or in part, the request for preauthorization to provide treatment or services:
 - 1. The date on which the request for preauthorization was received;
 - 2. Patient information, including date of injury, date of birth, payer claim number and Commission claim number;
 - 3. The date on which an IME was completed, if applicable;
 - 4. A statement of what has been authorized, including if applicable, a partial authorization;
 - 5. A statement of explanation if the request for preauthorization is denied, in whole or in part, which should include the medical reason supporting the payer's decision;
 - 6. A statement of the process under which a provider or injured employee may request reconsideration or review of the payer's denial, in whole or in part, of a request for preauthorization, which shall include the following information:
 - a. For a decision that is issued without obtaining an IME that is not subject to R20-5-1304(B):

"If you wish to request reconsideration of the decision regarding your request for preauthorization to provide treatment or services, you must send a written request for reconsideration to:

Name of Payer or Review Organization Identified by Payer
Commission Address
Phone
Fax
E-mail

You must include the specific reason and justification to support your request. Please include additional supporting medical documentation if not previously provided."
 - b. For a decision that is supported by an IME:

"If you wish review of the decision regarding your request for preauthorization to provide treatment or services, then the injured employee is required to file a request for investigation under A.R.S. § 23-1061(J)."
 - c. For a decision that is issued without obtaining an IME that is subject to R20-5-1304(B):

"If you disagree with this decision and wish to request review by the Industrial Commission of Arizona, then you may submit a request for administrative review under R20-5-1311 to:

Industrial Commission of Arizona
Attn: Medical Resource Office
Commission Address
Commission Telephone Number

The provider shall file this request promptly and include the following information: patient information, including name, address, payer claim number, Commission claim number, and date of injury; diagnosis or ICD code; employer, insurance carrier or TPA information; provider information; information pertaining to request for treatment, including the justification for treatment; applicable treatment guideline or guidelines; denial of treatment by payer; copies of relevant medical information or records; and whether the request for medical treatment or services involves a request for urgent care or a life-threatening condition."
- I. A payer shall provide a copy of its written decision to deny treatment or services to the injured employee.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1310. Payer Reconsideration on Request for Preauthorization

- A.** Except as provided in subsection (C), a payer shall communicate to the provider its decision on a request for reconsideration no later than 10 business days after the request is received. This decision shall comply with the requirements set forth in subsection (E). For purposes of this subsection, the 10 business days begin to run the day after the payer receives the request for reconsideration.
- B.** If a payer fails to respond to a request for reconsideration within 10 business days, the provider or injured employee may submit a request for administrative review directly to the Commission as provided in R20-5-1311.
- C.** If, no later than 10 business days after a request for reconsideration has been received, a payer provides notice to the provider that an IME has been requested under R20-5-114, then the payer's decision on a request for reconsideration shall be issued no later than 10 business days after the final IME report has been received by the payer. The payer shall provide a copy of the final IME report to the provider upon receipt of the report.
- D. Commission Review of Payer Reconsideration Decision:**
1. An injured employee or provider may seek review of a payer reconsideration decision by requesting an administrative review by the Commission as provided in R20-5-1311 unless the payer decision was supported by an IME.
 2. An injured employee may seek review of a payer reconsideration decision that is supported by an IME by requesting an investigation under A.R.S. § 23-1061(J).
- E.** A payer shall include the following information in its written decision to approve or deny, in whole or in part, a request for reconsideration of a denial of preauthorization:
1. The date on which the request for reconsideration was received;
 2. Patient information, including date of injury, date of birth, payer claim number and Commission claim number;
 3. The date on which an IME was completed, if applicable;
 4. A statement of what has been authorized including, if applicable, a partial authorization;
 5. A statement of explanation if the request for treatment is denied, in whole or in part; and
 6. A statement of the process under which a provider or injured employee may request Commission review of the payer's denial, in whole or in part, of a request for preauthorization, which shall include the following information:
 - a. For a reconsideration decision that is issued without obtaining an IME:

“If you disagree with this reconsideration decision and wish to request review by the Commission, then you may submit a request for administrative review under R20-5-1311 to:

Industrial Commission of Arizona
Attn: Medical Resource Office
Commission Address
Commission Telephone Number.

The provider shall file this request promptly and include the following information: patient information, including name, address, payer claim number, Commission claim number, and date of injury; diagnosis or ICD code; employer, insurance carrier or TPA information; provider information; informa-

tion pertaining to request for treatment, including the justification for treatment; applicable treatment guideline and denial of treatment by payer; copies of relevant medical information or records; copies of relevant documentation related to the payer reconsideration decision; and whether the request for medical treatment or services involves a request for urgent care or a life-threatening condition.”

- b.** For reconsideration of a decision that is supported by an IME:

“If you disagree with this reconsideration decision and wish review by the Commission, then the injured employee is required to file a request for investigation under A.R.S. § 23-1061(J).”

- F.** A payer shall provide a copy of its written reconsideration decision to deny treatment or services to the injured employee.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1311. Administrative Review by Commission

- A.** Until further action of the Commission under R20-5-1301(C), administrative review under this Article is limited to requests for medical treatment or services related to the management of chronic pain and the use of opioids for all stages of pain management.
- B.** A request for administrative review shall be in writing and submitted by mail, electronically or by fax. The request shall include the following information:
1. Identifying information of the injured employee and claim, including the injured employee's name, address, commission claim number, and date of injury;
 2. Diagnosis and ICD code;
 3. Identifying information of the employer, insurance carrier or TPA;
 4. Identifying information of the provider;
 5. Information pertaining to request for treatment, such as the justification for treatment, applicable treatment guideline and, if applicable, the payer's denial of treatment;
 6. Copies of relevant medical information or records;
 7. Copies of documentation related to the payer's decision or non-response; and
 8. Whether the request for medical treatment or services involves a request for urgent care or a life-threatening condition.
- C.** Upon receipt of a request for administrative review, the Commission shall determine whether the administrative review is available under this Article.
1. If administrative review is not available, then no later than three business days after receiving a request for administrative review, the Commission shall send notice to the injured employee and payer that administrative review is not available.
 2. If administrative review is available, then no later than three business days after receiving the request, the Commission shall send notice to the payer that a request for administrative review has been received and provide information on how to participate in the process.
- D.** The administrative review conducted under this Section shall apply the guidelines as described in this Article and include a peer review performed by an individual meeting the requirements of subsection (I). The peer review shall consist of a records review and, when possible as described in subsection (I)(5), a conversation between the provider and individual conducting the peer review.

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- E. The Commission may enter into an agreement with one or more contractors, who shall be URAC accredited, to provide the review described in subsection (D).
- F. The payer shall pay for the costs of the peer review conducted by the contractor.
- G. To assist in its review, the Commission or its contractor may request or receive additional information and documentation from the provider, injured employee or payer, who shall cooperate and provide the Commission or its contractor with any necessary medical information, including information pertaining to the payer's decision.
- H. Before the Commission or its contractor issues a determination denying the request for treatment or services, a good faith effort shall be made to conduct a peer review with the provider requesting authorization to perform the treatment or services.
- I. The individual conducting the peer review shall:
1. Hold an active, unrestricted license or certification to practice medicine or a health profession and be involved in the active practice of medicine or a health profession during the five preceding years. For purposes of this subsection, "active practice" means performing patient care for a minimum of eight hours per week in one of the five preceding years;
 2. Be licensed in Arizona, unless the Commission or its contractor is unable to find such an individual, in which case the peer review may be conducted by an individual who is licensed in another state of the United States and who meets the other requirements of this subsection;
 3. For a review of a request from an allopathic or osteopathic physician, nurse practitioner, physician assistant, or other mid-level provider, hold a current certification from the American Board of Medical Specialties or the American Osteopathic Association in the area or areas appropriate to the condition, procedure or treatment under review;
 4. Be in the same profession and the same specialty or subspecialty as typically performs or prescribes the medical procedure or treatment requested; and
 5. Make a good faith effort to contact the provider requesting the preauthorization. This good faith effort shall include making telephone contact during the provider's normal business hours and offering to schedule the peer review at a time convenient for the provider.
- J. A provider may bill the payer for time spent participating in a peer review under this Section.
- K. The Commission or its contractor shall issue a written determination of its administrative review that contains the name and title of the person that performed the administrative review, and includes the following information:
1. Whether the request for treatment or services is authorized or denied, in whole or in part;
 2. The information reviewed;
 3. The principle reason for the decision; and
 4. The clinical basis and rationale for the decision.
- L. An interested party dissatisfied with the administrative review determination may request that the dispute be referred to the Commission's Administrative Law Judge Division for hearing. This request for hearing shall:
1. Be in writing;
 2. Filed no later than 10 business days after the administrative review determination is issued; and
 3. State whether the party requests to participate in the Fast Track ALJ Dispute Resolution Program by stipulation, or declines to participate in the Fast Track ALJ Dispute Resolution Program.
- M. If a timely request for hearing is filed, the administrative review determination is deemed null and void and shall serve no evidentiary purpose.
- N. The information provided by the parties under this Section and the determination issued by the Commission shall become a part of the Commission claims file for the injured employee.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

R20-5-1312. Hearing Process

- A. A referral of a request for hearing under R20-5-1311(L) shall be processed as provided for in the Act unless all parties agree to participate in the fast track process.
- B. The following applies only to the Fast Track ALJ Dispute Resolution Program:
1. Parties must agree to participate in the Fast Track ALJ Dispute Resolution Program with the understanding that a short form decision will be issued.
 2. Review by the presiding ALJ shall be limited to the treatment or service dispute considered at the administrative review under R20-5-1311.
 3. The presiding ALJ shall issue a notice of hearing within 10 business days of the receipt of the fully executed agreement to participate and certificate of readiness.
 4. The hearing shall be held within 30 calendar days from the day that the notice of hearing is issued to the extent practicable.
 5. Discovery is limited to five interrogatories and no depositions are permitted.
 6. The presiding ALJ shall take all lay witness testimony at the time of the hearing and will not hold any further hearings.
 7. The presiding ALJ shall consider documentary medical evidence only; no medical testimony shall be taken.
 8. Medical file review opinions shall be deemed to constitute substantial evidence to support the requested treatment or service.
 9. All documentary evidence shall be submitted no later than 10 business days before the scheduled hearing.
 10. The hearing shall be recorded, but not transcribed, unless one or more of the parties files a request for review under A.R.S. § 23-942 and A.R.S. § 23-943.
 11. The presiding ALJ shall issue a short form decision within five business days after the matter is deemed submitted.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 1730, effective October 1, 2016 (Supp. 16-2).

23-107. General powers

A. The commission has full power, jurisdiction and authority to:

1. Formulate and adopt rules and regulations for effecting the purposes of this article.
2. Administer and enforce all laws for the protection of life, health, safety and welfare of employees in every case and under every law when such duty is not specifically delegated to any other board or officer, and, when such duty is specifically delegated, to counsel, advise and assist in the administration and enforcement of such laws and for such purposes may conduct investigations.
3. Promote the voluntary arbitration, mediation and conciliation of disputes between employers and employees.
4. License and supervise the work of private employment offices, bring together employers seeking employees and working people seeking employment, and make known the opportunities for employment in the state.
5. Collect, collate and publish all statistical and other information relating to employees, employers, employments and places of employment with other appropriate statistics.
6. Act as the regulatory agency insuring that workers' compensation carriers are processing claims in accordance with chapter 6 of this title.
7. Provide nonpublic, confidential or privileged documents, materials or other information to another state, local or federal regulatory agency for the purpose of the legitimate administrative needs of the programs administered by that agency if the recipient agency agrees and warrants that it has the authority to maintain and will maintain the confidentiality and privileged status of the documents, materials or other information.
8. Receive nonpublic documents, materials and other information from another state, local or federal regulatory agency to properly administer programs of the commission. The commission shall maintain as confidential or privileged any document, material or other information that is identified by the exchange agency as confidential or privileged under the laws of the jurisdiction that is the source of the document, material or other information.
9. Enter into agreements that govern the exchange of nonpublic documents, materials and other information that are consistent with paragraphs 7 and 8. The commission may request nondisclosure of information that is identified as privileged or confidential. Any disclosure pursuant to paragraph 7 or 8 or this paragraph is not a waiver of any applicable privilege or claim of confidentiality in the documents, materials or other information.

B. Upon petition by any person that any employment or place of employment is not safe or is injurious to the welfare of any employee, the commission has power and authority, with or without notice, to make investigations necessary to determine the matter complained of.

C. The members of the commission may confer and meet with officers of other states and officers of the United States on matters pertaining to their official duties.

D. Notwithstanding any other law, the commission may protect from public inspection the financial information that is received from a private entity that applies to self-insure or that renews its self-insurance plan pursuant to section 23-961, subsection A if the information is kept confidential by the private entity in its ordinary and regular course of business.

23-921. Administration of chapter

A. The industrial commission of Arizona is charged with the duties of the administration of this chapter, and with the adjudication of claims for compensation arising out of provisions of this chapter and any of its members or assistants so authorized may:

1. Hold hearings at any place within the state or without the state by agreement of the parties.
2. Administer oaths.
3. Issue and serve by the commission's representatives, or by any sheriff, subpoenas for the attendance of witnesses and claimants and the production of reports, papers, contracts, books, accounts, documents and testimony. The commission may require the attendance and testimony of employers, their officers and representatives before any proceeding of the commission, and the production by employees of books, records, papers and documents.
4. Generally provide for the taking of testimony and for the recording of proceedings held in accordance with this chapter.

B. The commission may make and declare all rules and regulations which are reasonably required in the performance of its duties, including but not limited to rules of practice and procedure in connection with hearing and review proceedings. Such rules and regulations may provide for informal prehearing conferences in order to expedite claim adjudication, amicably dispose of controversies, narrow issues and simplify the method of proof at hearings.

C. The commission may incur such expenses as it determines are reasonably necessary to perform its authorized functions, which expenses shall be a charge against the administrative fund.

D. The commission may charge any person with contempt who refuses to comply with any order of the commission, upon application to the superior court. Any person held in contempt may be punished by a fine of not to exceed one thousand dollars.

23-1062.03. Evidence-based medical treatment guidelines

The commission shall develop and implement a process for the use of evidence-based medical treatment guidelines, where appropriate, to treat injured workers no later than December 31, 2014. The commission shall provide a progress report to the governor, the president of the senate and the speaker of the house of representatives describing the status of the development and implementation of this process no later than the end of each calendar year beginning on December 31, 2012, and ending on December 31, 2014. If the commission requires additional time beyond December 31, 2014, to develop and implement this process, then the commission shall include in its 2014 report a projected timetable to complete the process.

Conference Engrossed

State of Arizona
Senate
Fifty-third Legislature
First Regular Session
2017

CHAPTER 287

SENATE BILL 1332

AN ACT

AMENDING SECTION 23-722.04, ARIZONA REVISED STATUTES; REPEALING SECTION 23-941.01, ARIZONA REVISED STATUTES; AMENDING TITLE 23, CHAPTER 6, ARTICLE 3, ARIZONA REVISED STATUTES, BY ADDING A NEW SECTION 23-941.01; AMENDING SECTION 23-1062, ARIZONA REVISED STATUTES; RELATING TO WORKERS' COMPENSATION.

(TEXT OF BILL BEGINS ON NEXT PAGE)

Be it enacted by the Legislature of the State of Arizona:

Section 1. Section 23-722.04, Arizona Revised Statutes, is amended to read:

23-722.04. Unemployment insurance information; disclosure; violation; classification

A. The department or the office of economic opportunity may disclose unemployment insurance information to the following entities:

1. Any federal, state or local governmental agency in the investigation of fraud relating to public programs or the misuse of public monies.

2. Divisions of the department, including the employment and rehabilitation services administrations, for program and research purposes.

3. The workforce Arizona council for program performance, regional planning and other program and research purposes.

4. The department of education to evaluate adult education program performance and for other primary and adult education program and research purposes.

5. The Arizona board of regents, universities under the jurisdiction of the Arizona board of regents and community college districts to evaluate program performance and for other program and research purposes.

6. The United States department of labor, or its agents, or the United States census bureau, or its agents, as required by law or in connection with the requirements imposed as a result of receiving federal funding.

7. Department contractors or subcontractors, or their agents, for the sole purpose of providing for the processing, storage and transmission of information. □ This disclosure must be consistent with this section.

8. THE INDUSTRIAL COMMISSION OF ARIZONA, DEPARTMENT OF INSURANCE OR ATTORNEY GENERAL FOR USE BY THOSE AGENCIES, OR THEIR AGENTS OR CONTRACTORS, IN THE PREVENTION, INVESTIGATION AND PROSECUTION OF WORKERS' COMPENSATION FRAUD.

B. On the request of one of the entities ~~prescribed~~ **SPECIFIED** in subsection A of this section to the department or the office of economic opportunity, the department or the office of economic opportunity shall disclose unemployment insurance information to the entity pursuant to guidelines established by the workforce

data task force established by section 41-5404 and pursuant to a written data sharing agreement with the requesting entity in a form determined by the workforce data task force pursuant to the laws of this state and applicable federal regulations.□ The department or the office of economic opportunity may disclose the unemployment insurance information only after the requesting entity has demonstrated that the information will be kept confidential, except for those purposes for which the information was provided to the requesting entity, and that the requesting entity has security safeguards in place to prevent the unauthorized disclosure of the information.

C. Except as otherwise allowed by law or as otherwise authorized by agreement between the department of economic security and the United States department of labor, the department of economic security or the office of economic opportunity may not use federal unemployment insurance grant monies to pay for any costs incurred in processing and handling requests for disclosure of unemployment insurance information. The department **OF ECONOMIC SECURITY** and the office of economic opportunity, in consultation with the workforce data task force, shall establish a rate structure that complies with 20 Code of Federal Regulations section 603.8 for costs incurred in processing requests for disclosure of unemployment insurance information.

D. The requesting entity may not make public any unemployment insurance information that identifies an individual or the individual's employer.□ Any unauthorized disclosure, including security breaches, shall be reported to the department and the office of economic opportunity immediately.□ Any person who knowingly discloses confidential unemployment insurance information in violation of this section without prior written authorization from the department or the office of economic opportunity or authorization as otherwise provided by law is guilty of a class 3 misdemeanor.

E. The office of economic opportunity may use unemployment insurance information to perform economic **analysis ANALYSES**, for the development of labor market information and a state workforce evaluation data system and for other program and research purposes.

F. This section does not prohibit disclosure that is required or allowed by federal law.

Sec. 2. **Repeal**

Section **23-941.01**, Arizona Revised Statutes, is repealed.

Sec. 3. Title 23, chapter 6, article 3, Arizona Revised Statutes, is amended by adding a new section 23-941.01, to read:

23-941.01. Settlement of accepted claims; exception; definitions

A. THE INTERESTED PARTIES TO A CLAIM MAY:

1. SETTLE AND RELEASE ALL OR ANY PART OF AN ACCEPTED CLAIM FOR COMPENSATION, BENEFITS, PENALTIES OR INTEREST.

2. IF THE PERIOD OF DISABILITY IS TERMINATED BY THE CARRIER, SPECIAL FUND OR SELF-INSURED EMPLOYER, NEGOTIATE A FULL AND FINAL SETTLEMENT.

B. ANY FULL AND FINAL SETTLEMENT SHALL:

1. BE IN WRITING.

2. BE SIGNED BY THE CARRIER, SPECIAL FUND OR SELF-INSURED EMPLOYER AND THE EMPLOYEE OR THE EMPLOYEE'S AUTHORIZED REPRESENTATIVE.

3. ACKNOWLEDGE THAT THE EMPLOYEE HAD THE OPPORTUNITY TO SEEK LEGAL ADVICE AND BE REPRESENTED BY COUNSEL.

4. INCLUDE A DESCRIPTION OF THE EMPLOYEE'S MEDICAL CONDITIONS THAT HAVE BEEN IDENTIFIED AND CONTEMPLATED AT THE TIME OF THE SETTLEMENT AGREEMENT.

C. IF THE EMPLOYEE IS REPRESENTED BY COUNSEL, THE FULL AND FINAL SETTLEMENT SHALL INCLUDE THE FOLLOWING ATTESTATIONS:

1. THE EMPLOYEE UNDERSTANDS THE RIGHTS SETTLED AND RELEASED BY THE AGREEMENT AND WAS REPRESENTED BY COUNSEL.

2. THE EMPLOYEE HAS BEEN PROVIDED INFORMATION FROM THE CARRIER, SPECIAL FUND OR SELF-INSURED EMPLOYER THAT OUTLINES ANY REASONABLE ANTICIPATED FUTURE MEDICAL, SURGICAL AND HOSPITAL BENEFITS RELATING TO THE CLAIM AND THE PROJECTED COST OF THOSE BENEFITS AND THAT PROVIDES AN EXPLANATION OF HOW THOSE PROJECTED COSTS WERE DETERMINED.

3. THE EMPLOYEE UNDERSTANDS THAT MONIES RECEIVED FOR FUTURE MEDICAL TREATMENT ASSOCIATED WITH THE INDUSTRIAL INJURY SHOULD BE SET ASIDE TO ENSURE THAT THE COSTS OF SUCH TREATMENT WILL BE PAID.

4. THE PARTIES HAVE CONSIDERED AND TAKEN REASONABLE STEPS TO PROTECT ANY INTERESTS OF MEDICARE, MEDICAID, THE INDIAN HEALTH SERVICE AND THE UNITED STATES DEPARTMENT OF VETERANS AFFAIRS, INCLUDING ESTABLISHING A MEDICARE SAVINGS ACCOUNT IF NECESSARY.□

5. THE PARTIES HAVE CONDUCTED A SEARCH FOR AND TAKEN REASONABLE STEPS TO SATISFY ANY IDENTIFIED MEDICAL LIENS.

D. IF THE EMPLOYEE IS NOT REPRESENTED BY COUNSEL, THE EMPLOYEE SHALL APPEAR BEFORE AN ADMINISTRATIVE LAW JUDGE AND THE ADMINISTRATIVE LAW JUDGE SHALL MAKE SPECIFIC FACTUAL FINDINGS REGARDING WHETHER THE REQUIREMENTS OF SUBSECTION B AND SUBSECTION C, PARAGRAPHS 2, 3, 4 AND 5 OF THIS SECTION ARE SATISFIED. THE ADMINISTRATIVE LAW JUDGE MAY NOT APPROVE THE SETTLEMENT IF THE REQUIREMENTS OF SUBSECTION B OF THIS SECTION ARE NOT MET OR IF THE SETTLEMENT IS NOT DEEMED FAIR AND REASONABLE TO THE EMPLOYEE.

E. A FULL AND FINAL SETTLEMENT IS NOT VALID AND ENFORCEABLE UNLESS THE FULL AND FINAL SETTLEMENT IS APPROVED BY THE COMMISSION. WHEN DETERMINING WHETHER TO APPROVE A SETTLEMENT, THE COMMISSION SHALL CONSIDER WHETHER THE SETTLEMENT IS IN THE BEST INTERESTS OF THE EMPLOYEE BASED ON THE FOLLOWING CRITERIA:

- 1. WHETHER THE EMPLOYEE'S INJURIES ARE STABILIZED.**
- 2. THE PERMANENCY OF THE EMPLOYEE'S INJURIES.**

F. A LUMP SUM SETTLEMENT PAYMENT SHALL BE MADE TO THE EMPLOYEE WITHIN FIFTEEN DAYS AFTER THE AWARD APPROVING THE SETTLEMENT BECOMES FINAL.

G. THE CARRIER, SPECIAL FUND OR SELF-INSURED EMPLOYER SHALL NOTIFY THE ATTENDING PHYSICIAN OF THE APPROVAL OF A FULL AND FINAL SETTLEMENT IF THE FULL AND FINAL SETTLEMENT TERMINATES THE EMPLOYEE'S ENTITLEMENT TO MEDICAL BENEFITS. UNLESS MEDICAL BENEFITS RENDERED BEFORE THE APPROVAL DATE OF THE FULL AND FINAL SETTLEMENT ARE SUBJECT TO A DISPUTE OR PAYMENT FOR THE TREATMENT WAS INCLUDED IN THE FULL AND FINAL SETTLEMENT AGREEMENT, THE CARRIER, SPECIAL FUND OR SELF-INSURED EMPLOYER REMAINS RESPONSIBLE FOR PAYMENT FOR THE TREATMENT NOT COVERED BY THE FULL AND FINAL SETTLEMENT AGREEMENT AS PROVIDED BY THIS CHAPTER.

H. NOTWITHSTANDING SUBSECTION A OF THIS SECTION, A FULL AND FINAL SETTLEMENT MAY NOT BE NEGOTIATED TO SETTLE ISSUES RESULTING IN TOTAL AND PERMANENT DISABILITY PURSUANT TO SECTION 23-1045, SUBSECTIONS C AND D.

I. A FULL AND FINAL SETTLEMENT AGREEMENT MAY NOT INCLUDE THE SETTLEMENT OF CLAIMS UNRELATED TO THE CLAIM FOR COMPENSATION, BENEFITS, PENALTIES AND INTEREST.

J. THIS SECTION DOES NOT APPLY TO THE SETTLEMENT OF CLAIMS THAT HAVE BEEN DENIED.

K. FOR THE PURPOSES OF THIS SECTION:

1. "FULL AND FINAL SETTLEMENT" MEANS A SETTLEMENT IN WHICH THE INJURED EMPLOYEE OR, IF THE INJURED EMPLOYEE IS DECEASED, THE EMPLOYEE'S ESTATE, SURVIVING SPOUSE OR DEPENDENT WAIVES ANY FUTURE ENTITLEMENT TO BENEFITS ON THE CLAIM AND ANY FUTURE RIGHT TO CHANGE THE CLAIM PURSUANT TO SECTION 23-1044, SUBSECTION F OR REOPEN THE CLAIM PURSUANT TO SECTION 23-1061, SUBSECTION H.

2. "SPECIAL FUND" MEANS THE SPECIAL FUND ESTABLISHED BY SECTION 23-1065.

Sec. 4. Section 23-1062, Arizona Revised Statutes, is amended to read:

23-1062. Medical, surgical, hospital benefits; translation services; travel expenses; commencement of compensation; method of compensation

A. Promptly, on notice to the employer, every injured employee shall receive medical, surgical and hospital benefits or other treatment, nursing, medicine, surgical supplies, crutches and other apparatus, including artificial members, reasonably required at the time of the injury, and during the period of disability. Such benefits shall be termed "medical, surgical and hospital benefits".¹

B. Medical, surgical and hospital benefits include translation services, if needed.□ A carrier, self-insurance pool or employer that does not direct care pursuant to section 23-1070 may choose the translator if the translator is certified by an outside agency and is not an employee of the carrier, self-insurance pool or employer. If the carrier, self-insurance pool or employer is unable to locate a certified translator for the particular language or dialect needed, the parties may agree on a translator who is not a certified translator.

C. COMPENSATION FOR MEDICAL, SURGICAL AND HOSPITAL BENEFITS SHALL INCLUDE REIMBURSEMENT FOR REASONABLE TRAVEL EXPENSES IF THE EMPLOYEE MUST TRAVEL MORE THAN TWENTY-FIVE MILES FROM THE EMPLOYEE'S PLACE OF RESIDENCE TO OBTAIN MEDICAL CARE FOR THE INJURY.

↪ D. The first installment of compensation is to be paid no later than the twenty-first day after written notification by the commission to the carrier of the filing of a claim unless the right to compensation is denied. Thereafter, compensation shall be paid at least once each two weeks during the period of temporary total disability and at least monthly thereafter. Compensation shall not be paid for the first seven days after the

injury. If the incapacity extends beyond the period of seven days, compensation shall begin on the eighth day after the injury, but if the disability continues for one week beyond such seven days, compensation shall be computed from the date of the injury.

~~D.~~ E. Compensation shall be made by negotiable instrument, payable immediately on demand or, at the election of the employee and if offered by the employer or carrier, by another commonly accepted method for transferring money by banking institutions, including electronic fund transfers to the employee's account or a prepaid debit card account that is established for the purpose of making direct electronic payment to the employee.

Sec. 5. Industrial commission of Arizona; review of authorization process; delayed repeal

A. On or before December 31, 2017, the industrial commission of Arizona shall review and determine a process for streamlining the authorization process for treatment that is within the evidence-based medical treatment guidelines.

B. This section is repealed from and after June 30, 2018.

Sec. 6. Effective date

Section 23-941.01, as repealed by this act, and section 23-941.01, as added by this act, are effective from and after October 31, 2017.

APPROVED BY THE GOVERNOR MAY 8, 2017.

FILED IN THE OFFICE OF THE SECRETARY OF STATE MAY 8, 2017.

DEPARTMENT OF HEALTH SERVICES

Title 9, Chapter 7, Article 1, General Provisions; Article 3, Radioactive Material Licensing; Article 4, Standards for Protection against Ionizing Radiation; Article 6, Use of X-Rays in the Healing Arts; Article 7, Medical Uses of Radioactive Material; Article 10, Notices, Instructions, and Reports to Radiation Workers, Inspections; Article 15, Transportation; Article 19, Physical Protection for Category 1 and Category 2 Quantities of Radioactive Material

Amend: R9-7-102; R9-7-103; R9-7-302; R9-7-303; R9-7-304; R9-7-305; R9-7-306; R9-7-311; R9-7-313; R9-7-323; R9-7-408; R9-7-415; R9-7-417; R9-7-418; R9-7-419; R9-7-448; R9-7-451; Appendix C; R9-7-611.01; R9-7-613; R9-7-710; R9-7-711; R9-7-719; R9-7-721; Exhibit A; R9-7-1006; R9-7-1507; R9-7-1508; R9-7-1510; R9-7-1512; R9-7-1515; R9-7-1927; R9-7-1943; R9-7-1975; R9-7-1977; R9-7-19101

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM – EXPEDITED RULEMAKING

MEETING DATE: July 10, 2018

AGENDA ITEM: E-5

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF HEALTH SERVICES

Title 9, Chapter 7, Article 1, General Provisions; Article 3, Radioactive Material Licensing; Article 4, Standards for Protection against Ionizing Radiation; Article 6, Use of X-Rays in the Healing Arts; Article 7, Medical Uses of Radioactive Material; Article 10, Notices, Instructions, and Reports to Radiation Workers, Inspections; Article 15, Transportation; Article 19, Physical Protection for Category 1 and Category 2 Quantities of Radioactive Material

Amend: R9-7-102, R9-7-103, R9-7-302, R9-7-303, R9-7-304, R9-7-305, R9-7-306, R9-7-311, R9-7-313, R9-7-323, R9-7-408, R9-7-415, R9-7-417, R9-7-418, R9-7-419, R9-7-448, R9-7-451, Appendix C, R9-7-611.01, R9-7-613, R9-7-710, R9-7-711, R9-7-719, R9-7-721, Exhibit A, R9-7-1006, R9-7-1507, R9-7-1508, R9-7-1510, R9-7-1512, R9-7-1515, R9-7-1927, R9-7-1943, R9-7-1975, R9-7-1977, R9-7-19101

SUMMARY OF THE RULEMAKING

This expedited rulemaking, from the Arizona Department of Health Services (Department), seeks to amend 34 rules, one appendix, and one exhibit in A.A.C. Title 9, Chapter 7. The Department states that the purpose of the rulemaking is to remain in compliance with the U.S. Nuclear Regulatory Commission and to reduce the administrative burden of the rules by clarifying the existing language in the rules, correcting cross-references, and making the rules easier to understand.

The Department indicates that the use of the expedited rulemaking process is justified by A.R.S. § 41-1027 because the rulemaking does not increase the cost of regulatory compliance or any fees, or reduce procedural rights of regulated persons, and either adopts or incorporates by

reference federal statutes and regulations. This rulemaking also implements the course of action proposed in a five-year review report to be heard by the Council on the same day.

Proposed Action

- The Department seeks to amend R9-7-102 to clarify, remove, and add definitions relating to radioactive materials,
- The Department also seeks to fix cross-references, clarify language, and update errors.
- The Department seeks to amend the Articles in an effort to stay in compliance with the U.S. Nuclear Regulatory Commission, which periodically issues changes as the Regulation Toolbox: Review Summary Sheets for Regulation Amendments (RATS IDs). The Department seeks to incorporate these changes to remain in compliance.

1. Are the rules legal, consistent with legislative intent, and within the agency's statutory authority?

Yes. The Department cites to both general and specific authority, including A.R.S. § 30-654(B)(5) which authorizes the Department to “adopt rules deemed necessary.”

2. Do the rules establish a new fee or contain a fee increase?

No. The rules do not establish a new fee or contain a fee increase.

3. Does the agency adequately address the comments on the proposed rules and any supplemental proposals?

No. The Department indicates that it has not received any public comments on the rulemaking.

4. Are the final rules a substantial change, considered as a whole, from the proposed rules and any supplemental proposals?

No. The only change that was made between the Notice of Proposed Expedited Rulemaking and the Notice of Final Expedited Rulemaking was a typographical error.

5. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The rules are not more stringent than corresponding federal law.

6. Do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

The Department indicates that it is authorized to issue licenses and registrations for sources of ionizing radiation and those persons using these sources pursuant to A.R.S. Title 30,

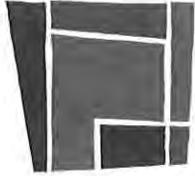
Chapter 2, Article 2, as amended by Laws 2017, Ch. 313. This licensing and registration must be compatible with requirements in the Agreement. The rules refer to permits both general and specific. The general permit applies to certain levels of radioactive material, and specific permits are issued by rule for quantities and uses that are specific to the user and their training or scope of practice.

7. Does the preamble disclose a reference to any study relevant to the rules that the agency reviewed and either did or did not rely upon?

No. The Department indicates that it did not rely on any study for this rulemaking.

8. Conclusion

If approved, this expedited rulemaking will become effective immediately upon filing with the Secretary of State. See A.R.S. § 41-1027(H). Council staff recommends approval of the expedited rulemaking.



ARIZONA DEPARTMENT OF HEALTH SERVICES

POLICY & INTERGOVERNMENTAL AFFAIRS

May 16, 2018

Nicole O. Colyer, Esq., Chair
Governor's Regulatory Review Council
Arizona Department of Administration
100 N. 15th Avenue, Suite 305
Phoenix, AZ 85007

RE: 9 A.A.C. 7 Department of Health Services – Radiation Control

Dear Ms. Colyer:

Enclosed is the administrative rule identified above which I am submitting, as the Designee of the Director of the Department of Health Services, for approval by the Governor's Regulatory Review Council (Council) under A.R.S. §§ 41-1027 and 41-1052.

The following information is provided for your use in reviewing the enclosed rule package pursuant to A.R.S. § 41-1052 and A.A.C. R1-6-202:

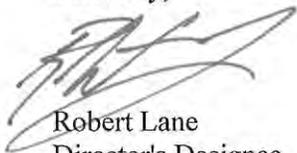
1. The close of record:
The close of record was May 11, 2018. Submission of the rule is within the 120 days allowed for Final Expedited Rulemaking.
2. Explanation of how the expedited rule meets the criteria in A.R.S. § 41-1027(A):
The rulemaking does not increase the cost of regulatory compliance, increase a fee, or reduce procedural rights of persons regulated. The rulemaking adopts without material change federal regulations related to the control of radioactive material in a manner that is consistent with Arizona's agreement with the U.S. Nuclear Regulatory Commission. In addition, the rulemaking removes obsolete or confusing requirements and clarifies current requirements.
3. Whether the rulemaking relates to a five-year-review report and, if applicable, the date the report was approved by the Council:
The rulemaking for 9 A.A.C. 7 relates in part to a five-year-review report for Article 3 that is scheduled to be reviewed for the July 10, 2018 Council meeting.
4. A list of all items enclosed:
 - a. Notice of Final Expedited Rulemaking, including the Preamble, Table of Contents, and text of the rule
 - b. Statutory authority
 - c. Current rule

Douglas A. Ducey | Governor Cara M. Christ, MD, MS | Director

The Department is requesting that the rules be heard at the Council meeting on July 10, 2018.

I certify that the Preamble of this rulemaking discloses a reference to any study relevant to the rule that the Department reviewed and either did or did not rely on in its evaluation of or justification for the rule.

Sincerely,

A handwritten signature in black ink, appearing to be 'RL', written over a horizontal line.

Robert Lane
Director's Designee

RL:rms

Enclosures

NOTICE OF FINAL EXPEDITED RULEMAKING
TITLE 9. HEALTH SERVICES
CHAPTER 7. RADIATION CONTROL
ARTICLE 1. GENERAL PROVISIONS
ARTICLE 3. RADIOACTIVE MATERIAL LICENSING
ARTICLE 4. STANDARDS FOR PROTECTION AGAINST IONIZING RADIATION
ARTICLE 6. USE OF X-RAYS IN THE HEALING ARTS
ARTICLE 7. MEDICAL USES OF RADIOACTIVE MATERIAL
ARTICLE 10. NOTICES, INSTRUCTIONS, AND REPORTS TO RADIATION
WORKERS; INSPECTIONS
ARTICLE 15. TRANSPORTATION
ARTICLE 19. PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2
QUANTITIES OF RADIOACTIVE MATERIAL

PREAMBLE

<u>1.</u>	<u>Article, Part, of Section Affected (as applicable)</u>	<u>Rulemaking Action</u>
	R9-7-102	Amend
	R9-7-103	Amend
	R9-7-302	Amend
	R9-7-303	Amend
	R9-7-304	Amend
	R9-7-305	Amend
	R9-7-306	Amend
	R9-7-311	Amend
	R9-7-313	Amend
	R9-7-323	Amend
	R9-7-408	Amend
	R9-7-415	Amend
	R9-7-417	Amend
	R9-7-418	Amend
	R9-7-419	Amend
	R9-7-448	Amend

R9-7-451	Amend
R9-7-611.01	Amend
R9-7-613	Amend
R9-7-710	Amend
R9-7-711	Amend
R9-7-719	Amend
R9-7-721	Amend
Exhibit A	Amend
R9-7-1006	Amend
R9-7-1507	Amend
R9-7-1508	Amend
R9-7-1510	Amend
R9-7-1512	Amend
R9-7-1515	Amend
R9-7-1927	Amend
R9-7-1943	Amend
R9-7-1975	Amend
R9-7-1977	Amend
R9-7-19101	Amend

2. Citations to the agency’s statutory authority for the rulemaking to include the authorizing statute (general) and the implementing statute (specific):

Authorizing Statutes: A.R.S. §§ 30-654(B)(5) and 36-136(G)

Implementing Statutes: A.R.S. §§ 30-654, 30-656, 30-657, 30-671 through 30-672.01, 30-681 through 30-689, and 30-721

3. The effective date of the rules:

The rule is effective the day the Notice of Final Expedited Rulemaking is filed with the Office of the Secretary of State.

4. Citations to all related notices published in the Register that pertain to the record of the final expedited rulemaking:

Notice of Rulemaking Docket Opening: 24 A.A.R. 793, April 13, 2018

Notice of Proposed Expedited Rulemaking: 24 A.A.R. 1325, May 4, 2018

Notice of Recodification: 24 A.A.R. 813, April 20, 2018

5. The agency’s contact person who can answer questions about the rulemaking:

Name: Colby Bower, Assistant Director
Address: Department of Health Services
Public Health Licensing Services
150 N. 18th Ave., Suite 510
Phoenix, AZ 85007
Telephone: (602) 542-6383
Fax: (602) 364-4808
E-mail: Colby.Bower@azdhs.gov
or

Name: Robert Lane, Chief
Address: Arizona Department of Health Services
Office of Administrative Counsel and Rules
150 N. 18th Avenue, Suite 200
Phoenix, AZ 85007
Telephone: (602) 542-1020
Fax: (602) 364-1150
E-mail: Robert.Lane@azdhs.gov

6. An agency's justification and reason why a rule should be made, amended, repealed or renumbered, under A.R.S. § 41-1027, to include an explanation about the rulemaking:

Arizona Revised Statutes (A.R.S.) § 30-654(B)(5), as revised by Laws 2017, Ch. 313, requires the Arizona Department of Health Services (Department) to make rules deemed necessary to administer A.R.S. Title 30, Chapter 4, Control of Ionizing Radiation. The Department recently recodified rules adopted in A.A.C. Title 12, Chapter 1 to implement the requirements in A.R.S. Title 30, Chapter 4 into A.A.C. Title 9, Chapter 7.

Arizona is an Agreement State by the Document negotiated between the United States Atomic Energy Commission (now U.S. Nuclear Regulatory Commission) and the Governor of Arizona in March of 1967 under A.R.S. § 30-656. In order to remain in compliance with the Agreement, Arizona must adopt regulations related to the control of radioactive material in a manner that is consistent with federal regulations. The U.S. Nuclear Regulatory Commission periodically issues changes, denoted as Regulation Toolbox: Review Summary Sheets for Regulation Amendments (RATS IDs), that are

required to be incorporated by Agreement States. Several RATS IDs have not yet been incorporated into Arizona's rules related to the control of radioactive material. The Department is now revising the newly recodified rules in A.A.C. Title 9, Chapter 7, by expedited rulemaking, to conform to the RATS IDs under 10 CFR Chapter I. The Department is also making other changes to reduce the administrative burden of the rules by clarifying existing language in the rules, correcting cross-references, and making the rules easier to understand.

The Department believes that these changes are consistent with the purpose of A.R.S. § 41-1027 in that this rulemaking does not increase the cost of regulatory compliance, does not increase a fee, or reduce a procedural right of regulated persons, and either adopts or incorporates by reference, without material change, federal statutes and regulations, or clarifies language of a rule without changing its effect.

7. A reference to any study relevant to the rule that the agency reviewed and proposes either to rely on or not to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

The Department did not review or rely on any study for this rulemaking.

8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state.

Not applicable

9. A summary of the economic, small business, and consumer impact:

Under A.R.S. § 41-1055(D)(2), the Department is not required to provide an economic, small business, and consumer impact statement.

10. A description of any changes between the proposed expedited rulemaking, including supplemental notices, and the final expedited rulemaking:

Between when the proposed expedited rulemaking was posted by the Department on April 11, 2018 and when the Notice was published, the Department corrected a typographical error in R9-7-613. This correction is also part of the final expedited rulemaking.

11. Agency's summary of the public or stakeholder comments or objections made about the rulemaking and the agency response to the comments:

The Department did not receive public or stakeholder comments about the rulemaking.

12. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

According to A.R.S. Title 30, Chapter 4, Article 2, as amended by Laws 2017, Ch. 313, the Department is authorized to issue licenses and registrations for sources of ionizing radiation and those persons using these sources. This licensing and registration must be compatible with requirements in the Agreement. The rules refer to permits both general and specific. The general permit applies to certain levels of radioactive material, and specific permits are issued by rule for quantities and uses that are specific to the user and their training or scope of practice.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

The rules are not more stringent than federal law.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

No such analysis was submitted.

13. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

In the rules being revised as part of this rulemaking, there are many incorporations by reference that are not being changed. These are listed below with the relevant rule

Section:

R9-7-102:

10 CFR 35.50(a) or (c)(1) and 10 CFR 35.59 (January 1, 2010)

10 CFR 71, Appendix A, Table A-1 (January 1, 2013)

10 CFR 71, Subpart D (January 1, 2010)

10 CFR 71.4 (January 1, 2013)

10 CFR 71.75 (January 1, 2013)

21 CFR 1020.40 (April 1, 2013)
40 CFR 190 and 191 (July 1, 2013)
49 CFR 107, 171 through 180 (October 1, 2013)
49 CFR 173.403 (October 1, 2012)

R9-7-103:

39 CFR 111.1 (July 1, 2007)
49 CFR 107.109, 107.111, 107.113, 171.2, 171.3, 172.200, 173.1, 173.3, 173.4,
173.401, 175.3, 175.10, 176.3, 176.5, 176.11, 176.24, 176.27, and 177.801
(October 1, 2007)

R9-7-304:

10 CFR 30.3 (January 1, 2013)

R9-7-306:

10 CFR 31.5(b), (c), and (d) (January 1, 2013)
10 CFR 32.57 (January 1, 2013)
10 CFR 70.39 (January 1, 2013)
10 CFR 110 (January 1, 2013)
10 CFR 32.21 (January 1, 2013)
10 CFR 110 (January 1, 2013)

R9-7-311:

10 CFR 30.32(j) (January 1, 2013)
10 CFR 32.72 (January 1, 2013)
10 CFR 31.5(c)(13)(i) (January 1, 2013)
10 CFR 32.52 (January 1, 2013)
10 CFR 32.53 through 32.56 (January 1, 2015)
10 CFR 32.57, 32.58, 32.59, and 70.39 (January 1, 2015)
10 CFR 32.61 and 32.62 (January 1, 2015)
10 CFR 32.74 (January 1, 2015)
10 CFR 32.201 (January 1, 2013)

R9-7-323:

10 CFR 30.35, 40.36, and 70.25 (January 1, 2015)
10 CFR 30.36(g)(1), 40.42(g)(1), and 70.38(g)(1) (January 1, 2015)
10 CFR 30.36(i), 40.42(i), and 70.38(i) (January 1, 2015)
10 CFR 30.36(j), 40.42(j), and 70.38(j) (January 1, 2015)

R9-7-418:

NIST Handbook 150 (March 1994)

NIST Handbook 150-4 (August 1994)

R9-7-1507:

10 CFR 71, Subpart H (January 1, 2008)

R9-7-1508:

49 CFR 172.202 and 172.203(d) (October 1, 2007)

R9-7-1510:

10 CFR 71, Subparts A, G, and H (January 1, 2010)

10 CFR 71.22, (January 1, 2010)

10 CFR 71.43(g) (January 1, 2010)

10 CFR 71.45 (January 1, 2010)

10 CFR 71.47 (January 1, 2010)

10 CFR 71.71 and 71.73 (January 1, 2010)

10 CFR 71.4, revised January 1, 2010

10 CFR 71.85(c) (January 1, 2010)

49 CFR 173 and 178 (October 1, 2010)

49 CFR 173.403 (October 1, 2010)

49 CFR 173.443 (October 1, 2010)

R9-7-1512:

10 CFR 71.97 (January 1, 2015)

R9-7-1515:

10 CFR 71.14(a) (January 1, 2008)

R9-7-1927:

10 CFR 37.7 (January 1, 2015)

10 CFR part 73 (January 1, 2015)

In R9-7-1510(B)(1)(a) and (b), the citations to the incorporated 10 CFR 71.85(c) (January 1, 2010) and 49 CFR 173.403 (October 1, 2010) are being removed. In R9-7-1510(D)(1), the citation to 49 CFR 171.12 (October 1, 2010) is being corrected to 49 CFR 171.23 (October 1, 2010).

14. Whether the rule was previously made, amended, or repealed as an emergency rules. If so, cite the notice published in the Register as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and

the final rulemaking packages:

The rule was not previously made as an emergency rule.

15. The full text of the rule follows:

TITLE 9. HEALTH SERVICES
CHAPTER 7. RADIATION CONTROL

ARTICLE 1. GENERAL PROVISIONS

Section

- R9-7-102. Definitions
- R9-7-103. Exemptions

ARTICLE 3. RADIOACTIVE MATERIAL LICENSING

Section

- R9-7-302. Source Material; Exemptions
- R9-7-303. Radioactive Material Other Than Source Material; Exemptions
- R9-7-304. License Types
- R9-7-305. General Licenses – Source Material
- R9-7-306. General License – Radioactive Material Other Than Source Material
- R9-7-311. Special Requirements for a Specific License to Manufacture, Assemble, Repair, or Distribute Commodities, Products, or Devices that Contain Radioactive Material
- R9-7-313. Specific Terms and Conditions
- R9-7-323. Financial Assurance and Recordkeeping for Decommissioning

ARTICLE 4. STANDARDS FOR PROTECTION AGAINST IONIZING RADIATION

Section

- R9-7-408. Occupational Dose Limits for Adults
- R9-7-415. Dose Equivalent to an Embryo or Fetus
- R9-7-417. Testing for Leakage or Contamination of Sealed Sources
- R9-7-418. Surveys and Monitoring
- R9-7-419. Conditions Requiring Individual Monitoring of External and Internal Occupational Dose
- R9-7-448. Additional Reporting
- R9-7-451. Termination of a Radioactive Material License or a Licensed Activity

Appendix C. Quantities of Licensed or Registered Material Requiring Labeling

ARTICLE 6. USE OF X-RAYS IN THE HEALING ARTS

Section

- R9-7-611.01. Electronic Brachytherapy to Deliver Interstitial and ~~Intracavity~~ Intracavitary Therapeutic Radiation Dosage
- R9-7-613. Veterinary Medicine Radiographic Systems

ARTICLE 7. MEDICAL USES OF RADIOACTIVE MATERIAL

Section

- R9-7-710. Radiation Safety Officer Training
- R9-7-711. Authorized Medical Physicist Training
- R9-7-719. Training for Uptake, Dilution, and Excretion Studies
- R9-7-721. Training for Imaging and Localization Studies Not Requiring a Written Directive
- Exhibit A. Medical Use Groups

**ARTICLE 10. NOTICES, INSTRUCTIONS, AND REPORTS TO RADIATION
WORKERS; INSPECTIONS**

Section

- R9-7-1006. Consultation with Workers During Inspections

ARTICLE 15. TRANSPORTATION

Section

- R9-7-1507. Packaging Quality Assurance
- R9-7-1508. Advance Notification of Nuclear Waste Transportation
- R9-7-1510. Packaging
- R9-7-1512. Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste
- R9-7-1515. Exemption for Low-level Radioactive Materials

**ARTICLE 19. PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2
QUANTITIES OF RADIOACTIVE MATERIAL**

Section

- R9-7-1927. Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material
- R9-7-1943. General Security Program Requirements
- R9-7-1975. Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material
- R9-7-1977. Advance Notification of Shipment of Category 1 Quantities of Radioactive
- R9-7-19101. Form of Records

ARTICLE 1. GENERAL PROVISIONS

R9-7-102. Definitions

Terms defined in A.R.S. § 30-651 have the same meanings when used in this Chapter, unless the context otherwise requires. Additional subject-specific definitions are used in other Articles.

“A1” means the maximum activity of special form radioactive material permitted in a type A package. These values are either listed in 10 CFR 71, Appendix A, Table A-1, or may be derived in accordance with the procedures prescribed in 10 CFR 71, Appendix A, revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

“A2” means the maximum activity of radioactive material, other than special form radioactive material, low specific activity (LSA) material, and surface contaminated object (SCO) material, permitted in a Type A package. These values are either listed in 10 CFR 71, Appendix A, Table A-1, or may be derived in accordance with the procedure prescribed in 10 CFR 71, Appendix A, revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

“Absorbed dose” means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the gray (Gy) and the rad.

“Accelerator” means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV. For purposes of this definition, “particle accelerator” is an equivalent term.

“Accelerator produced material” means any material made radioactive by irradiating it in a particle accelerator.

“Act” means A.R.S. Title 30, Chapter 4.

“Activity” means the rate of disintegration, transformation, or decay of radioactive material. The units of activity are the becquerel (Bq) and the curie (Ci).

“Adult” means an individual 18 or more years of age.

“Agreement State” means any state with which the United States Nuclear Regulatory Commission has entered into an effective agreement under Section 274(b) of the Atomic Energy Act of 1954, as amended (73 Stat. 689). “Nonagreement State” means any other

state.

“Airborne radioactive material” means any radioactive material dispersed in the air in the form of aerosols, dusts, fumes, mists, vapors, or gases.

“Airborne radioactivity area” means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed radioactive material, exist in concentrations:

In excess of the derived air concentrations (DACs) specified in Appendix B, Table I of Article 4 of these rules; or

That an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.

“ALARA” means as low as is reasonably achievable, making every reasonable effort to maintain exposures to radiation as far below the dose limits in these rules as is practical, consistent with the purpose for which the licensed or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed or registered sources of radiation in the public interest.

“Analytical x-ray equipment” means equipment used for x-ray diffraction or x-ray-induced fluorescence analysis.

“Analytical x-ray system” means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials.

“Annual” means done or performed yearly. For purposes of Chapter 1, any required activity done or performed within plus or minus two weeks of the annual due date is considered done or performed in a timely manner.

“Approved individual” means an individual whom the licensee has determined to be trustworthy and reliable for unescorted access in accordance with subpart B of this part and who has completed the training required by 10 CFR 37.43(c).

“Authorized medical physicist” means an individual who meets the requirements in R9-7-711; or is identified as an authorized medical physicist or teletherapy physicist on:

A specific medical use license issued by the Department, the NRC, or another Agreement State;

A medical use permit issued by a NRC master material licensee;
A permit issued by the Department, the NRC, or another Agreement State broad scope medical use licensee; or
A permit issued by a NRC master material license broad scope medical use permittee.

“Authorized nuclear pharmacist” means a pharmacist who meets the requirements in R9-7-712; or is ~~identified as an authorized nuclear pharmacist on~~:

A Identified as an authorized nuclear pharmacist on a specific license issued by the Department, the NRC, or another Agreement State that authorizes medical use or the practice of nuclear pharmacy;

A Identified as an authorized nuclear pharmacist on a permit issued by a NRC master material licensee that authorizes medical use or the practice of nuclear pharmacy;

A Identified as an authorized nuclear pharmacist on a permit issued by the Department, the NRC, or another Agreement State broad scope medical use licensee that authorizes medical use or the practice of nuclear pharmacy; or

A Identified as an authorized nuclear pharmacist on a permit issued by a NRC master material license broad scope medical use permittee that authorizes medical use or the practice of nuclear pharmacy; or

~~Is identified~~ Identified as an authorized nuclear pharmacist by a commercial nuclear pharmacy that has been authorized to identify authorized nuclear pharmacists; or

~~Is designated~~ Designated as an authorized nuclear pharmacist in accordance with R9-7-311(G).

“Authorized user” means a physician, dentist, or podiatrist who meets the requirements in R9-7-719, R9-7-723, R9-7-727, R9-7-728, or R9-7-744; or is identified as an authorized user on:

The Department, NRC, or another Agreement State license that authorizes the medical use of radioactive material;

A permit issued by a NRC master material licensee that is authorized to permit the medical use of radioactive material;

A permit issued by the Department, the NRC, or another Agreement State specific licensee of broad scope that is authorized to permit the medical use of

radioactive material; or

A permit issued by a NRC master material license broad scope permittee that is authorized to permit the medical use of radioactive material.

“Background investigation” means an assessment of an individual’s prior actions and experience conducted by a licensee or applicant, to support the determination of the individual’s trustworthiness and reliability in accordance with 10 CFR 37.25.

“Background radiation” means radiation from cosmic sources; not technologically enhanced naturally occurring radioactive material, including radon (except as a decay product of source or special nuclear material); and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents, such as Chernobyl, that contribute to background radiation and are not under the control of a licensee. “Background radiation” does not include sources of radiation regulated by the Department.

“Becquerel” (Bq) means the International System (SI) unit for activity and is equal to 1 disintegration per second (dps or tps).

“Bioassay” means the determination of kinds, quantities, or concentrations, and in some cases, the locations of radioactive material in the human body, whether by direct measurement, in vivo counting, or by analysis and evaluation of materials excreted or removed from the human body. For purposes of these rules, “radiobioassay” is an equivalent term.

“Brachytherapy” means a method of radiation therapy in which an encapsulated source or group of sources is utilized to deliver beta or gamma radiation at a distance of up to a few centimeters, by surface, intracavitary or interstitial application.

“Byproduct material” means:

Any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium or thorium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute “byproduct material” within this definition;

Any discrete source of radium-226 that is produced, extracted, or converted after

extraction, for use for a commercial, medical, or research activity; or any material that, has been made radioactive by use of a particle accelerator; and is produced, extracted, or converted after extraction, for use for a commercial, medical, or research activity; and

Any discrete source of naturally occurring radioactive material, other than source material, that the NRC, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security and; before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

“Calendar quarter” means not less than 12 consecutive weeks nor more than 14 consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged such that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. A licensee or registrant shall not change the method of determining calendar quarters for purposes of this Chapter except at the beginning of a calendar year.

“Calibration” means the determination of:

The response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or

The strength of a source of radiation relative to a standard.

“Carrier” means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

“Certifiable cabinet x-ray system” means an existing uncertified x-ray system that meets or has been modified to meet the certification requirements specified in 21 CFR 1020.40, revised April 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

“Certificate holder” means a person who has been issued a certificate of compliance or other package approval by the Department or NRC.

“Certificate of Compliance” (CoC) means the certificate issued by the NRC under 10 CFR 71, Subpart D, (Revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.),

which authorizes the design of a package for the transportation of radioactive material. “Certified cabinet x-ray system” means an x-ray system that has been certified in accordance with 21 CFR 1010.2, as being manufactured and assembled on or after April 10, 1975, in accordance with the provisions of 21 CFR 1020.40, both sections revised April 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

“CFR” means Code of Federal Regulations.

“Chelating agent” means amine polycarboxylic acids, hydroxycarboxylic acids, gluconic acid, and polycarboxylic acids.

“Civil penalty” means the monetary fine which may be imposed on licensees by the Department, pursuant to A.R.S. § 30-687, for violations of the Act, this Chapter, or license conditions.

“Collective dose” means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

“Committed dose equivalent” (HT,50) means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

“Committed effective dose equivalent” (HE,50) is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($HE,50 = \sum w_T HT,50$).

“Consortium” means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution or a federal facility or a medical facility.

“Contamination” means the presence of a radioactive substance on a surface in quantities in excess of 0.4 Bq/cm² (1×10^{-5} μCi/cm²) for beta and gamma emitters and low toxicity alpha emitters, or 0.04 Bq/cm² (1×10^{-6} μCi/cm²) for all other alpha emitters.

“Fixed contamination” means contamination that cannot be removed from a surface during normal conditions of transport.

“Non-fixed contamination” means contamination that can be removed from a

surface during normal conditions of transport.

“Criticality Safety Index (CSI)” means the dimensionless number (rounded up to the next tenth) assigned to and placed on the label of a fissile material package, to designate the degree of control of accumulation of packages, overpacks or freight containers containing fissile material during transportation. Determination of the criticality safety index is described in 10 CFR 71.22, 10 CFR 71.23, and 10 CFR 71.59. The criticality safety index for an overpack, freight container, consignment or conveyance containing fissile material packages is the arithmetic sum of the criticality safety indices of all the fissile material packages contained within the overpack, freight container, consignment or conveyance.

“Curie” means a unit of quantity of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of $3.7E + 10^{10}$ transformations per second (tps).

“Current license or registration” means a license or registration issued by the Department and for which the licensee has paid the license or registration fee for the current year according to R9-7-1304.

“Deep-dose equivalent” (Hd), which applies to external whole body exposure, is the dose equivalent at a tissue depth of 1 centimeter (1000 mg/cm^2).

“Depleted uranium” means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

“Discrete source” means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

“Dose” is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these rules, “radiation dose” is an equivalent term.

“Dose equivalent” (HT) means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the sievert (Sv) and rem.

“Dose limits” means the permissible upper bound of radiation doses established in accordance with these rules. For purposes of these rules, “limits” is an equivalent term.

“Dosimeter” (See “Individual monitoring device”)

“Effective dose equivalent” (HE) means the sum of the products of the dose equivalent to each organ or tissue (HT) and the weighting factor (wT) applicable to each of the body organs or tissues that are irradiated ($HE = \sum wTHT$).

“Effluent release” means any disposal or release of radioactive material into the ambient atmosphere, soil, or any surface or subsurface body of water.

“Embryo/fetus” means the developing human organism from conception until the time of birth.

“Enclosed beam x-ray system” means an analytical x-ray system constructed in such a way that access to the interior of the enclosure housing the x-ray source during operation is precluded except through bypassing of interlocks or other safety devices to perform maintenance or servicing.

“Enclosed radiography” means industrial radiography conducted by using cabinet radiography or shielded room radiography.

“Cabinet radiography” means industrial radiography conducted by using an x-ray machine in an enclosure not designed for human admittance and which is so shielded that every location on the exterior meets the conditions for an “unrestricted area.”

“Shielded room radiography” means industrial radiography conducted using an x-ray machine in an enclosure designed for human admittance and which is so shielded that every location of the exterior meets the conditions for an “unrestricted area.”

“Entrance or access point” means any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

“Exhibit” for purposes of these rules, is equivalent in meaning to the word “Schedule” as found in previously issued rules, current license conditions, and regulation guide.

“Explosive material” means any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

“Exposure” means:

Being subjected to ionizing radiation or radioactive materials.

The quotient of dQ by dm where “ dQ ” is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass “ dm ” are completely stopped in air. The special unit of exposure is the roentgen (R).

“Exposure rate” means the exposure per unit of time.

“External dose” means that portion of the dose equivalent received from any source of radiation outside the body.

“Extremity” means ~~the shoulder girdle to the phalanges and the lower two thirds of the femur to the phalanges~~ hand, elbow, arm below the elbow, foot, knee, and leg below the knee.

“Fail-safe characteristics” means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

“FDA” means the United States Food and Drug Administration.

“Field radiography” means industrial radiography, utilizing a portable or mobile x-ray system, which is not conducted in a shielded enclosure.

“Field station” means a facility where radioactive sources may be stored or used and from which equipment is dispatched to temporary job sites.

“Former U.S. Atomic Energy Commission (AEC) or U.S. Nuclear Regulatory Commission (NRC) licensed facilities” means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or critical mass experimental facilities where AEC or NRC licenses have been terminated.

“Generally applicable environmental radiation standards” means standards issued by the U.S. Environmental Protection Agency (EPA), 40 CFR 190 and 191, revised July 1, 2013, incorporated by reference, and available under R9-7-101, under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material. This incorporated material contains no future editions or amendments.

“Gray” (Gy) means the International System (SI) unit of absorbed dose and is equal to 1 joule per kilogram. One gray equals 100 rad.

“Hazardous waste” means those wastes designated as hazardous in A.R.S. § 49-921(5).

“Healing arts” means the practice of medicine, dentistry, osteopathy, podiatry, chiropractic, and veterinary medicine.

“Health care institution” means every place, institution, or building which provides facilities for medical services or other health-related services, not including private clinics or offices which do not provide overnight patient care.

“High radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 1 mSv (0.1 rem) in one hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

“Human use” means the internal or external administration of radiation or radioactive materials to human beings.

“Impound” means to abate a radiological hazard. Actions which may be taken by the Department in impounding a source of radiation include seizing the source of radiation, controlling access to an area, and preventing a radiation machine from being utilized.

“Indian ~~tribe~~ Tribe” means an Indian or Alaska native ~~tribe~~ Tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian ~~tribe~~ Tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a.

“Individual” means any human being.

“Individual monitoring” means the assessment of:

Dose equivalent

By the use of individual monitoring devices, or

By the use of survey data, or

Committed effective dose equivalent

By bioassay; or

By determination of the time-weighted air concentrations to which an individual has been exposed, that is, DAC-hours. (See the definition of DAC-hours in Article 4).

“Individual monitoring device” means a device designed to be worn by a single individual for the assessment of dose equivalent. For purposes of this Chapter, “dosimeter” and “personnel dosimeter,” are equivalent terms. Examples of individual monitoring devices are film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, optical stimulation devices, and personal (“lapel”) air sampling

devices.

“Individual monitoring equipment” means one or more individual monitoring devices.

For purposes of this Chapter, “personnel monitoring equipment” is an equivalent term.

“Industrial radiography” means the examination of the macroscopic structure of materials by non-destructive methods utilizing sources of ionizing radiation.

“Injection tool” means a device used for controlled subsurface injection of radioactive tracer material.

“Inspection” means an examination or observation by a representative of the Department, including but not limited to tests, surveys, and monitoring to determine compliance with rules, orders, requirements and conditions of the License or certificate of registration.

“Interlock” means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

“Internal dose” means that portion of the dose equivalent received from radioactive material taken into the body.

“Irradiate” means to expose to radiation.

“Laser” (light amplification by the stimulated emission of radiation) means any device which can produce or amplify electromagnetic radiation with ~~wave lengths~~ wavelengths in the range of 180 nanometers to 1 millimeter primarily by the process of controlled stimulated emission.

“Lens dose equivalent” (LDE) means the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeters (300 mg/cm²).

“License” means the grant of authority, issued pursuant to Articles 3 and 14 of this Chapter and A.R.S. §§ 30-671, 30-672, and 30-721 et seq., to acquire, possess, transfer, and use sources of radiation. The types of licenses issued by the Department are described in R9-7-1302.

“Licensed material” means radioactive material received, possessed, used, transferred, or disposed of under a general or specific license issued by the Department.

“Licensed practitioner” means a person licensed or otherwise authorized by law to practice medicine, dentistry, osteopathy, chiropractic, podiatry, or naturopathy in this state.

“Licensee” means any person who is licensed by the Department under this Chapter to acquire, possess, transfer, or use sources of radiation.

“Licensing State” means any state having regulations equivalent to this Chapter relating

to, and an effective program for the regulation of, naturally occurring and accelerator-produced radioactive material (NARM).

“Limits” (See “Dose limits”)

“Local components” means those parts of an analytical x-ray system that are struck by x-rays, including radiation source housings, port and shutter assemblies, collimator, sample holders, cameras, goniometer, detectors and shielding but not including power supplies, transformers, amplifiers, readout devices, and control panels.

“Logging supervisor” means the individual who provides personal supervision of the utilization of sources of radiation at the well site.

“Logging tool” means a device used subsurface to perform well logging.

“Lost or missing licensed or registered source of radiation” means licensed or registered source of radiation the location of which is unknown. Included are licensed radioactive material or a registered radiation source that has been shipped but has not reached its planned destination and whose location cannot be readily traced or ascertained in the transportation system.

“Low-level waste” means waste material which contains radioactive nuclides in concentrations or quantities which exceed applicable standards for unrestricted release but does not include:

High-level waste, such as irradiated reactor fuel, liquid waste from reprocessing irradiated reactor fuel, or solids into which any such liquid waste has been converted;
Waste material containing transuranic elements with contamination levels greater than 10 nanocuries per gram (370 kilobecquerels per kilogram) of waste material;
The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

“Low Specific Activity (LSA) material” means radioactive material with limited specific activity which is nonfissile or is excepted under 10 CFR 71.15, and which satisfies the descriptions and limits set forth in the following section. Shielding materials surrounding the LSA material may not be considered in determining the estimated average specific activity of the package contents. The LSA material must be in one of three groups:

- (1) LSA—I.
 - (i) Uranium and thorium ores, concentrates of uranium and thorium ores, and other ores containing naturally occurring radionuclides that are intended to be processed for the use of these

radionuclides;

- (ii) Natural uranium, depleted uranium, natural thorium or their compounds or mixtures, provided they are unirradiated and in solid or liquid form;
 - (iii) Radioactive material other than fissile material, for which the A2 value is unlimited; or
 - (iv) Other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the value for exempt material activity concentration determined in accordance with appendix A.
- (2) LSA—II.
- (i) Water with tritium concentration up to 0.8 TBq/liter (20.0 Ci/liter); or
 - (ii) Other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 10^{-4} A2/g for solids and gases, and 10^{-5} A2/g for liquids.
- (3) LSA—III. Solids (e.g., consolidated wastes, activated materials), excluding powders, that satisfy the requirements of 10 CFR 71.77, in which:
- (i) The radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.);
 - (ii) The radioactive material is relatively insoluble, or it is intrinsically contained in a relatively insoluble material, so that even under loss of packaging, the loss of radioactive material per package by leaching, when placed in water for 7 days will not exceed 0.1 A2; and
 - (iii) The estimated average specific activity of the solid, excluding any shielding material, does not exceed 2×10^{-3} A2/g.

“Major processor” means a user processing, handling, or manufacturing radioactive material exceeding Type A quantities as unsealed sources or material or exceeding four

times Type B quantities as sealed sources but does not include nuclear medicine programs, universities, industrial radiographers, or small industrial programs. Type A and B quantities are defined in 10 CFR 71.4, revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

“Medical dose” means a radiation dose intentionally delivered to an individual for medical examination, diagnosis, or treatment.

“Member of the public” means any individual except when that individual is receiving an occupational dose.

“MeV” means Mega Electron Volt which equals 1 million volts (10⁶ eV).

“Mineral logging” means any well logging performed in a borehole drilled for the purpose of exploration for minerals other than oil or gas.

“Minor” means an individual less than 18 years of age.

“Monitoring” means the measurement of radiation, ~~radio-active~~ radioactive material concentrations, surface area activities, or quantities of radioactive material, and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these rules, “radiation monitoring” and “radiation protection monitoring” are equivalent terms.

“Multiplier” means a letter representing a number. The use of a multiplier is based on the code given below:

<i>Prefix</i>	<i>Multiplier</i>	<i>Value</i>
	<i>Symbol</i>	
eka	E	10 ¹⁸
peta	P	10 ¹⁵
tera	T	10 ¹²
giga	G	10 ⁹
mega	M	10 ⁶
kilo	k	10 ³
milli	m	10 ⁻³
micro	u	10 ⁻⁶
nano	n	10 ⁻⁹
pico	p	10 ⁻¹²
femto	f	10 ⁻¹⁵

“NARM” means any naturally occurring or accelerator-produced radioactive material. It does not include byproduct, source, or special nuclear material. This term should not be confused with “NORM” which is defined as naturally occurring radioactive material.

“Normal operating procedures” means the entire set of instructions necessary to accomplish the intended use of the source of radiation. These procedures shall include, but are not limited to, sample insertion and manipulation, equipment alignment, routine maintenance by the licensee, and data recording procedures which are related to radiation safety.

“Natural radioactivity” means the radioactivity of naturally occurring radioactive substances.

“NRC” means Nuclear Regulatory Commission, the U.S. Nuclear Regulatory Commission, or its duly authorized representatives.

“NRC Document Control Desk” means the Nuclear Regulatory Document Control Desk. ATTN: Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

“Nuclear waste” means any highway route controlled quantity (defined in 49 CFR 173.403, revised October 1, 2012, incorporated by reference, and available under R9-7-101; this incorporated material contains no future editions or amendments) of source, byproduct, or special nuclear material required to be in NRC-approved packaging while transported to, through, or across state boundaries to a disposal site, or to a collection point for transport to a disposal site. Additional requirements associated with transportation of radioactive material can be found in Article 15.

“Occupational dose” means the dose received by an individual in the course of employment in which the individual’s assigned duties involve exposure to sources of radiation, whether in the possession of a licensee, registrant, or other person.

Occupational dose does not include a dose received from background radiation, medical administration of radiation to the individual, exposure to an individual who has been administered radioactive material and released in accordance with R9-7-717, voluntary participation in a medical research program, or as a member of the public.

“Open beam system” means an analytical x-ray system in which an individual could place some body part in the primary beam path during normal operation.

“Package” means the packaging together with its radioactive contents as presented for transport.

“Particle accelerator” (See “Accelerator”)

“Permanent radiographic installation” means a fixed, shielded installation or structure designed or intended for industrial radiography and in which industrial radiography is regularly performed.

“Personnel dosimeter” (See “Individual monitoring device”)

“Personnel monitoring equipment” (See “Individual monitoring device”)

“Personal supervision” means supervision in which the supervising individual is physically present at the site where sources of radiation and associated equipment are being used, watching the performance of the supervised individual and in such proximity that immediate assistance can be given if required.

“PET” (See Positron Emission Tomography (PET))

“Pharmacist” means an individual licensed by this state to compound and dispense drugs, prescriptions, and poisons.

“Physician” means an individual licensed pursuant to A.R.S. Title 32, Chapters 13 or 17.

“Positron Emission Tomography (PET)” means an imaging technique using radionuclides to produce high resolution images of the body’s biological functions.

“Positron Emission Tomography radionuclide production facility” means a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.

“Preceptor” means an individual who provides, directs, or verifies training and experience required for an individual to become an authorized user, an authorized medical physicist, an authorized nuclear pharmacist, or a Radiation Safety Officer.

“Primary beam” means radiation which passes through an aperture of the source housing by a direct path from the x-ray tube or a radioactive source located in the radiation source housing.

“Public dose” means the dose received by a member of the public from radiation from radioactive material released by a licensee or registrant, or exposure to a source of radiation used in a licensed or registered operation. It does not include an occupational dose or a dose received from background radiation, medical administration of radiation to the individual, exposure to an individual who has been administered radioactive material and released in accordance with R9-7-717, or voluntary participation in a medical research program.

“Pyrophoric liquid” means any liquid that ignites spontaneously in dry or moist air at or below 130° F (54.4° C).

“Pyrophoric solid” means any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and, when ignited, burns so vigorously and persistently that it creates a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

“Qualified expert” means an individual certified in the appropriate field by the American Board of Radiology or the American Board of Health Physics, or having equivalent qualifications that provide the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs; or an individual certified in Therapeutic Radiological Physics or X-ray and Radium Physics by the American Board of Radiology, or having equivalent qualifications that provide training and experience in the clinical applications of radiation physics to radiation therapy, to calibrate radiation therapy equipment. The detailed requirements for a particular qualified expert may be provided in the respective Articles of this Chapter. For clarification purposes, a qualified expert is not always an authorized medical physicist; however, an authorized medical physicist is included within the definition of “qualified expert.”

“Quality Factor” (Q) means the modifying factor, listed in Tables I and II of this Article, that is used to derive dose equivalent from absorbed dose.

“Quarter” (See “Calendar quarter”)

“Rad” means the special unit of absorbed dose. One rad equals 100 ergs per gram, or 0.01 gray.

“Radiation” means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of these rules, this term is synonymous with ionizing radiation. Equivalent terminology for non-ionizing radiation is defined in Article 14.

“Radiation area” means any area accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.05 mSv (0.005 rem) in one hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

“Radiation dose” (See “Dose”)

“Radiation machine” means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.

“Radiation Safety Officer” (RSO) means the individual and who for license conditions: Meets the requirements in 10 CFR 35.50(a) or (c)(1) and 10 CFR 35.59, (revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.); or is identified as a Radiation Safety Officer on a specific medical use license issued by the NRC or an Agreement State; or a medical use permit issued by a NRC master material licensee; Or, who, for registration conditions, is designated by the registrant as the individual who has the knowledge, authority, and responsibility to apply appropriate radiation protection principles to ensure radiation safety and compliance with the Act, this Chapter and any registration conditions.

“Radiation Safety Officer” (RSO) means the individual and who for license conditions: Meets the requirements of R9-7-407, and for a medical license meets the training requirements of R9-7-710 or is identified as a Radiation Safety Officer on a specific medical use license issued by the Department, the NRC, or another Agreement State; or a medical use permit issued by a NRC master material licensee; Or, who meets the requirements in R9-7-512 on a specific industrial license issued by the Department, the NRC, or another Agreement State; or an industrial use permit issued by a NRC master material licensee; Or, who, for registration conditions, is designated by the registrant as the individual who has the knowledge, authority, and responsibility to apply appropriate radiation protection principles to ensure radiation safety and compliance with the Act, this Chapter and any registration conditions.

“Radioactive marker” means radioactive material placed subsurface or on a structure intended for subsurface use for the purpose of depth determination or direction orientation.

“Radioactive material” means any solid, liquid, or gas which emits radiation spontaneously.

“Radioactivity” means emission of electromagnetic energy or particles or both during the transformation of unstable atomic nuclei.

“Radiographer” means any individual who performs or personally supervises industrial

radiographic operations and who is responsible to the licensee or registrant for assuring compliance with the requirements of this Chapter and all conditions of the license or certificate of registration.

“Radiographer’s assistant” means any individual who, under the personal supervision of a radiographer, uses sources of radiation, radiographic exposure devices, related handling tools, or survey instruments in industrial radiography.

“Registrant” means any person who is registered with the Department and is legally obligated to register with the Department pursuant to these rules and the Act.

“Registration” is the process by which a person becomes a registrant pursuant to Article 2 or 14 of this Chapter. With the exception of registration of persons who install or service radiation machines, the types of registrations issued by the Department are described in R9-7-1302.

“Regulations of the U.S. Department of Transportation” means the federal regulations in 49 CFR 107, 171 through 180, revised October 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

“Rem” means the special unit of dose equivalent (see “Dose equivalent”). The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem - 0.01 sievert).

“Research and Development” means exploration, experimentation, or the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes. Research and Development does not include the internal or external administration of radiation or radioactive material to human beings.

“Restricted area” means any area where the licensee or registrant controls access for purposes of protecting individuals from exposure to radiation and radioactive material. A restricted area does not include any areas used for residential quarters, although a room or separate rooms in a residential building may be set apart as a restricted area.

“Roentgen” (R) means the special unit of exposure and is equal to the quantity of x or gamma radiation which causes ionization in air equal to 258 microcoulomb per kilogram (see “Exposure”).

“Safety system” means any device, program, or administrative control designed to ensure

radiation safety.

“Sealed source” means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.

“Sealed Source and Device Registry” means the national registry that contains all the registration certificates, generated by both the NRC and the Agreement States, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for each source or device.

“Shallow dose equivalent” (HS), which applies to the external exposure of the skin of the whole body or the skin of an extremity, is taken as the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm²).

“Shielded position” means the location within a radiographic exposure device or storage container which, by manufacturer’s design, is the proper location for storage of the sealed source.

“Sievert” means the SI unit of dose equivalent (see “Dose equivalent”). The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor (1 Sv = 100 rem).

“Site boundary” means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee or registrant.

“Source changer” means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those also used for transporting and storage of sealed sources.

“Source holder” means a housing or assembly into which a radioactive source is placed for the purpose of facilitating the handling and use of the source in well-logging operations.

“Source material” means:

Uranium or thorium, or any combination of uranium or thorium, in any physical or chemical form; or

Ores that contain by weight 1/20 of 1 percent (0.05 percent) or more of uranium, thorium, or any combination of uranium and thorium.

Source material does not include special nuclear material.

“Source material milling” means any activity that results in the production of byproduct

material as defined by the second subsection under the definition of “Byproduct material.”

“Source of radiation” or “source” means any radioactive material or any device or equipment emitting, or capable of producing, radiation.

“Special form radioactive material” means radioactive material that satisfies all of the following conditions:

It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

The piece or capsule has at least one dimension not less than 5 millimeters (0.2 inch); and

It satisfies the test requirements specified in 10 CFR 71.75, revised January 1, 2013, incorporated by reference, available under R9-7-101. This incorporated material contains no future editions or amendments. A special form encapsulation designed in accordance with the U.S. Nuclear Regulatory Commission requirements in effect on June 30, 1983, and constructed prior to July 1, 1985, may continue to be used. A special form encapsulation ~~constructed after June 30, 1985, shall meet requirements of this definition applicable at the time of its construction~~ designed in accordance with the requirements of 10 CFR 71.4 in effect on March 31, 1996 (see 10 CFR part 71, revised as of January 1, 1996), and constructed before April 1, 1998; and special form material that was successfully tested before September 10, 2015 in accordance with the requirements of 10 CFR 71.75(d) in effect before September 10, 2015 may continue to be used. Any other special form encapsulation must meet the specifications of this definition.

“Special nuclear material in quantities not sufficient to form a critical mass” means Uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; Uranium-233 in quantities not exceeding 200 grams; Plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: for each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed one. For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{XgmsU235}{350} + \frac{YgmsU233}{200} + \frac{ZgmsPu}{200} \leq 1$$

“Storage area” means any location, facility, or vehicle which is used to store, transport, or secure a radiographic exposure device, storage container, sealed source, or other source of radiation when it is not in use.

“Storage container” means a device in which sealed sources are transported or stored.

“Subsurface tracer study” means the release of a substance tagged with radioactive material for the purpose of tracing the movement or position of the tagged substance in the well-bore or adjacent formation.

“Survey” means an evaluation of the production, use, release, disposal, or presence of sources of radiation or any combination thereof under a specific set of conditions to determine actual or potential radiation hazards. Such evaluations include, but are not limited to, tests, physical examination and measurements of levels of radiation or concentration of radioactive material present.

“TEDE” (See “Total Effective Dose Equivalent”)

“Teletherapy” means therapeutic irradiation in which the source of radiation is at a distance from the body.

“Temporary job site” means any location where sources of radiation are used other than the specified locations listed on a license document. Storage of sources of radiation at a temporary jobsite shall not exceed six months unless the Department has granted an amendment authorizing storage at that jobsite.

“Test” means the process of verifying compliance with an applicable rule, order, or license condition.

“These rules” means all Articles of 9 A.A.C. 7.

“Total Effective Dose Equivalent” (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

“Total Organ Dose Equivalent” (TODE) means the sum of the deep-dose equivalent and the committed dose equivalent to the organ receiving the highest dose. Determination of TODE is described in R9-7-411.

“Tribal official” means the highest ranking individual that represents Tribal leadership, such as the Chief, President, or Tribal Council leadership.

“Unrefined and unprocessed ore” means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining. Processing does not include sieving or encapsulation of ore or preparation of samples for laboratory analysis.

“Unrestricted area” means any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive material. Any area used for residential quarters is an unrestricted area.

“Uranium - natural, depleted, enriched.”

- (1) Natural uranium means uranium (which may be chemically separated) with the naturally occurring distribution of uranium isotopes (approximately 0.711 weight percent uranium-235, and the remainder by weight essentially uranium-238).
- (2) Depleted uranium means uranium containing less uranium-235 than the naturally occurring distribution of uranium isotopes.
- (3) Enriched uranium means uranium containing more uranium-235 than the naturally occurring distribution of uranium isotopes.

“U.S. Department of Energy” means the Department of Energy established by P.L. 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the Department of Energy exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers, and components; and transferred to the U.S. Energy Research and Development Administration and to the administrator of that agency under sections 104(b), (c), and (d) of the Energy Reorganization Act of 1974 (P.L. 93-438, October 11, 1974, 88 Stat. 1233 at 1237, 42 U.S.C. 5814, effective January 19, 1975) and retransferred to the Secretary of Energy under Section 301(a) of the Department of Energy Organization Act (P.L. 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977).

“Very high radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose that exceeds 5 grays (500 rads) in one hour at one meter from a radiation source or one meter from any surface that the radiation penetrates.

“Waste” (See “Low-level waste”)

“Waste handling licensees” means persons licensed to receive and store radioactive wastes prior to disposal and persons licensed to dispose of radioactive waste.

“Week” means seven consecutive days starting on Sunday.

“Well-bore” means a drilled hole in which wireline service operations and subsurface tracer studies are performed.

“Well-logging” means the lowering and raising of measuring devices or tools which may contain sources of radiation into well-bores or cavities for the purpose of obtaining information about the well and adjacent formations.

“Whole body” means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knee.

“Wireline” means an armored cable containing one or more electrical conductors which is used to lower and raise logging tools in the well-bore.

“Wireline service operation” means any evaluation or mechanical service which is performed in the well-bore using devices on a wireline.

“Worker” means any individual engaged in work under a license or registration issued by the Department and controlled by employment or contract with a licensee or registrant.

“WL” means working level, any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of $1.3E + 5$ MeV of potential alpha particle energy. The short-lived radon daughters are – for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

“WLM” means working level month, an exposure to one working level for 170 hours (2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month).

“Workload” means the degree of use of an x-ray or gamma-ray source per unit time.

“Year” means the period of time beginning in January used to determine compliance with the provisions of these rules. The licensee or registrant may change the starting date of the year used to determine compliance by the licensee or registrant provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

R9-7-103. Exemptions

- A. Common and contract carriers, freight forwarders, and warehousemen who are subject to 49 CFR 107.109, 107.111, 107.113, 171.2, 171.3, 172.200, 173.1, 173.3, 173.4, 173.401, 175.3, 175.10, 176.3, 176.5, 176.11, 176.24, 176.27, and 177.801, revised October 1, 2007, of the U.S. Department of Transportation, or 39 CFR 111.1 of the U.S. Postal Service, revised July 1, 2007, incorporated by

reference, and available under R9-7-101, and who if need be, store radioactive material, for periods of less than 72 hours, in the regular course of their carriage for another, are exempt from this Chapter. The incorporated materials above contain no future editions or amendments.

- B.** Any U.S. Department of Energy contractor or subcontractor and any U.S. Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within this state are exempt from this Chapter to the extent that such contractor or subcontractor under the contract receives, possesses, uses, transfers, or acquires sources of radiation:
1. Prime contractors performing work for the Department of Energy at U.S. Government-owned or controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;
 2. Prime contractors of the Department of Energy performing research or development, manufacture, storage, testing or transportation of nuclear weapons or components thereof;
 3. Prime contractors of the Department of Energy using or operating nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel; and
 4. Any other prime contractor or subcontractor of the Department of Energy or of the Nuclear Regulatory Commission when the state and the Nuclear Regulatory Commission jointly determine:
 - a. That the exemption of the prime contractor or subcontractor is authorized by law; and
 - b. That under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.
- C.** Any licensee who delivers to a carrier for transport any package which contains radioactive material having a specific activity of 74 kBq/kg (2 nanocuries per gram) or less, is exempt from the provisions of this Chapter with respect to that package.
- D.** Any physician licensed by a State to dispense drugs in the practice of medicine is exempt from 10 CFR 71.5 with respect to transport by the physician of licensed

material for use in the practice of medicine. However, any physician operating under this exemption must be licensed under 10 CFR part 35 and/or R9-7-703.

ARTICLE 3. RADIOACTIVE MATERIAL LICENSING

R9-7-302. Source Material; Exemptions

- A. Any person is exempt from this Article to the extent the person receives, possesses, uses, delivers or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than 1/20th of 1 percent (0.0005) of the mixture, compound, solution, or alloy.
- B. Any person is exempt from this Article to the extent the person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material, provided that, the person does not refine or process the ore except as authorized in a specific license.
- C. Any person is exempt from this Article if the person receives, possesses, uses, or transfers:
 - 1. Any quantities of thorium contained in:
 - a. Incandescent gas mantles;
 - b. Vacuum tubes;
 - c. Welding rods;
 - d. Electric lamps for illuminating purposes provided that each lamp does not contain more than 50 milligrams of thorium;
 - e. Germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting, provided that each lamp does not contain more than 2 grams of thorium;
 - f. Rare earth metals, compounds, mixtures, or products containing not more than 0.25 percent by weight thorium, uranium, or any combination of thorium and uranium; or
 - g. Individual neutron dosimeters, provided that each dosimeter does not contain more than 50 milligrams of thorium;
 - 2. Source material contained in the following products:
 - a. Glazed ceramic tableware manufactured before August 27, 2013, provided that the glaze contains not more than 20 percent source material by weight;
 - b. Glassware containing not more than 2 percent by weight source material, glass enamel, and glass enamel frit containing not more than 10 percent

- source material by weight, but not including commercially manufactured glass brick, pane glass, ceramic tile or other glass, glass enamel or ceramic used in construction; or
- c. Piezoelectric ceramic containing not more than 2 percent source material by weight;
3. Photographic film, negatives, and prints containing uranium or thorium;
 4. Any finished product or part fabricated of, or containing, tungsten-thorium or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed 4 percent by weight and that the exemption contained in this subsection does not authorize the chemical, physical, or metallurgical treatment or processing of the finished product or part;
 5. Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of counterweights, provided that:
 - a. The counterweights are manufactured in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, authorizing distribution by the licensee according to 10 CFR 40;
 - b. Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: “DEPLETED URANIUM”;
 - c. Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: “UNAUTHORIZED ALTERATIONS PROHIBITED”; and
 - d. The exemption contained in this item does not authorize the chemical, physical, or metallurgical treatment or processing of any counterweight other than repair or restoration of any plating or other covering; and
 - e. The requirements specified in subsections (C)(5)(b) and (c) do not apply to counterweights manufactured prior to December 31, 1969; provided, that these counterweights are impressed with the legend, “CAUTION – RADIOACTIVE MATERIAL – URANIUM.”
 6. Natural or depleted uranium metal used as shielding and constituting part of any shipping container; provided that:
 - a. The shipping container is conspicuously and legibly impressed with the

legend “CAUTION – RADIOACTIVE SHIELDING – URANIUM,” and

- b. The uranium metal is encased in mild steel or equally fire resistant metal with minimum wall thickness of 1/8 inch (3.2 mm).
7. Thorium contained in finished optical lenses, provided that each lens does not contain more than 30 percent of thorium by weight, and that the exemption contained in this item does not authorize either:
 - a. The shaping, grinding, or polishing of a thoriated lens or manufacturing processes other than the assembly of a thoriated lens into optical systems and devices without any alteration of the lens; or
 - b. The receipt, possession, use, or transfer of thorium contained in contact lenses, spectacles, or the eyepieces of binoculars or other optical instruments;
 8. Uranium contained in detector heads of fire detection units, provided that each detector head contains not more than 5 nanocuries (185 Bq) of uranium; or
 9. Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:
 - a. The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide), and
 - b. The thorium content in the nickel-thoria alloy does not exceed 4 percent by weight.
- D.** The exemptions in subsection (C) do not authorize the manufacture of any of the products described.

R9-7-303. Radioactive Material Other Than Source Material; Exemptions

A. Exempt concentrations

1. Except as provided in subsection (A)(3) and (A)(4), any person is exempt from this Article if the person receives, possesses, uses, transfers, owns, or acquires products or materials containing radioactive material in concentrations not in excess of those listed in Exhibit A.
2. This Section shall not be deemed to authorize the import of radioactive material or products containing radioactive material.
3. A manufacturer, processor, or producer of a product or material is exempt from the requirements for a license issued under R9-7-311(A) or the requirements of this Article to the extent that this person transfers radioactive material contained

in a product or material in concentrations not in excess of those specified in Exhibit A of this Article and introduced into the product or material by a licensee holding a specific license issued by the NRC expressly authorizing such introduction. This exemption does not apply to the transfer of radioactive material contained in any food, beverage, cosmetic, drug, or other commodity or product designed for ingestion or inhalation by, or application to, a human being.

4. A person shall not introduce radioactive material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under subsection (A)(1) or equivalent Regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State, except in accordance with a license issued under 10 CFR 32.11.

B. Exempt items

1. Except for persons who apply radioactive material to, or persons who incorporate radioactive material into the following products, or persons who initially transfer for sale or distribution the following products, a person is exempt from this Chapter to the extent that the person receives, possesses, uses, transfers, owns, or acquires the following products:
 - a. Timepieces, hands, or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:
 - i. 925 megabecquerels (25 millicuries) of tritium per timepiece;
 - ii. 185 megabecquerels (5 millicuries) of tritium per hand;
 - iii. 555 megabecquerels (15 millicuries) of tritium per dial (bezels when used shall be considered part of the dial);
 - iv. 3.7 megabecquerels (100 microcuries) of promethium-147 per watch or 7.4 megabecquerels (200 microcuries) of promethium-147 per any other timepiece;
 - v. 740 kBq (20 microcuries) of promethium-147 per watch hand or 1.48 megabecquerels (40 microcuries) of promethium-147 per other timepiece hand;
 - vi. 2.22 megabecquerels (60 microcuries) of promethium-147 per watch dial or 4.44 MBq (120 microcuries) of promethium-147 per other timepiece dial (bezels, when used, shall be considered

- part of the dial);
- vii. The levels of radiation from hands and dials containing promethium-147 shall not exceed, when measured through 50 milligrams per square centimeter of absorber:
 - (1) For wrist watches, 1.0 μ Gy (0.1 millirad) per hour at 10 centimeters from any surface of the watch;
 - (2) For pocket watches, (0.1 millirad) per hour at 1 centimeter from any surface;
 - (3) For any other timepiece, 2.0 μ Gy (0.2 millirad) per hour at 10 centimeters from any surface;
 - viii. 37 kBq (1 microcurie) of radium-226 per timepiece in intact timepieces manufactured prior to November 30, 2007;
- b. Static elimination devices which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 18.5 MBq (500 μ Ci) of polonium-210 per device.
 - i. Ion generating tubes designed for ionization of air that contain, as a sealed source or sources, radioactive material consisting of a total of not more than 18.5 MBq (500 μ Ci) of polonium-210 per device or of a total of not more than 1.85 GBq (50 mCi) of hydrogen-3 (tritium) per device.
 - ii. Such devices authorized before October 23, 2012 for use under the general license then provided in R9-7-306 and equivalent regulations of the NRC or Agreement State and manufactured, tested, and labeled by the manufacturer in accordance with the specifications contained in a specific license issued by the NRC.
 - c. Balances of precision containing not more than 37 megabecquerels (1 millicurie) of tritium per balance or not more than 18.5 megabecquerels (0.5 millicurie) of tritium per balance part manufactured before December 17, 2007;
 - d. Marine compasses containing not more than 27.75 gigabecquerels (750 millicuries) of tritium gas and other marine navigational instruments containing not more than 9.25 gigabecquerels (250 millicuries) of tritium gas manufactured before December 17, 2007;

- e. Ionization chamber smoke detectors containing not more than 37 kBq (1 microcurie) of americium-241 per detector in the form of a foil and designed to protect life and property from fires;
- f. Electron tubes: Provided that each tube does not contain more than one of the following specified quantities of radioactive material:
 - i. 5.55 GBq (150 millicuries) of tritium per microwave receiver protector tube or 370 megabecquerels (10 millicuries) of tritium per any other electron tube;
 - ii. 37 kBq (1 microcurie) of cobalt 60;
 - iii. 185 kBq (5 microcuries) of nickel 63;
 - iv. 1.11 megabecquerels (30 microcuries) of krypton 85;
 - v. 185 kBq (5 microcuries) of cesium 137;
 - vi. 1.11 megabecquerels (30 microcuries) of promethium-147;
 - vii. And provided further, that the level of radiation due to radioactive material contained in each electron tube does not exceed 10 μ Gy (1 millirad) per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber. The term “electron tubes” includes spark gap tubes, power tubes, gas tubes, including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical current;
- g. Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, one or more sources of radioactive material provided that:
 - i. Each source contains no more than one exempt quantity set forth in Exhibit B of this Article; and
 - ii. Each instrument contains no more than 10 exempt quantities. For the purposes of this subsection, an instrument’s source or sources may contain either one type or different types of radionuclide and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in Exhibit B of this Article, provided the sum of the fractions do

- not exceed unity;
 - iii. For the purposes of subsection (B)(1)(h) only, 185 kBq (50 nanocurie) of americium-241 is considered an exempt quantity under Exhibit B of this Article;
 - h. Any person who desires to apply radioactive material to, or to incorporate radioactive material into, the products exempted in subsection (B)(1)(a), or who desires to initially transfer for sale or distribution such products containing radioactive material, should apply for a specific license pursuant to R9-7-311 of this Article, which license states that the product may be distributed by the licensee to persons exempt from the rules pursuant ~~R9-7-303(A)(1)~~ to subsection (A)(1).
- 2. Self-luminous products containing tritium, krypton-85, or promethium-147:
 - a. Except for persons who manufacture, process, initially transfer for sale or distribution, or produce self-luminous products containing tritium, krypton-85, or promethium-147, and except as provided in ~~paragraph (e) of this subsection (B)(2)(c)~~, a person is exempt from this Chapter if the person receives, possesses, uses, owns, transfers or acquires tritium, krypton-85 or promethium-147 in self-luminous products manufactured, processed, produced, imported, initially transferred for sale or distribution, or transferred under a specific license issued by the U.S. Nuclear Regulatory Commission and described in 10 CFR 32.22, and the license authorizes the transfer of the products to persons who are exempt from regulatory requirements.
 - b. Any person who desires to manufacture, process, or produce, or initially transfer for sale or distribution self-luminous products containing tritium, ~~krypton85~~ krypton-85, or promethium-147 for use under ~~paragraph (a) of this subsection~~ subsection (B)(2)(a), should apply for a license:
 - i. Under 10 CFR 32 and for a certificate of registration in accordance with 10 CFR 32.210, and
 - ii. As described in R9-7-311.
 - e. ~~The exemption in paragraph (a) of this subsection does not apply to tritium, krypton 85, or promethium 147 used in products for primarily frivolous purposes or in toys or adornments.~~

- ~~d.c.~~ A person is exempt from this Chapter if the person receives, possesses, uses, or transfers articles containing less than 3.7 kBq (100 nanocuries) of radium-226, manufactured prior to October 1, 1978.
3. Gas and aerosol detectors containing ~~radioactive~~ byproduct material
- a. Except for persons who manufacture, process, initially transfer for sale or distribution, or produce gas and aerosol detectors containing radioactive material, a person is exempt from this Chapter if the person receives, possesses, uses, transfers, owns, or acquires radioactive material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards, provided that detectors containing radioactive material shall be manufactured, imported, or transferred according to a specific license issued by the U.S. Nuclear Regulatory Commission and described in 10 CFR 32.26, or equivalent regulations of an Agreement or Licensing State, this exemption also covers gas and aerosol detectors manufactured or distributed before November 30, 2007 in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, or equivalent regulations of an Agreement or Licensing State and the license authorizes the transfer of the detectors to persons who are exempt from regulatory requirements.
- b. ~~Any person who desires to manufacture, process, or produce gas and aerosol detectors containing byproduct material, or to initially transfer such products for use under paragraph (a) of this subsection, should apply for a license described in R9-7-311.~~ Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an Agreement State are exempt under subsection (B)(3)(a), provided that the device is labeled in accordance with the specific license authorizing distribution of the general licensed device, and that the detectors meet the requirements of the regulations of the U.S. Nuclear Regulatory Commission.
- c. ~~Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an Agreement State are exempt under subsection (B)(4)(a), provided that the device is labeled in accordance with the specific license authorizing~~

~~distribution of the general licensed device, and that the detectors meet the requirements of the regulations of the U.S. Nuclear Regulatory Commission.~~ Any person who desires to manufacture, process, or produce gas and aerosol detectors containing byproduct material, or to initially transfer such products for use under subsection (B)(3)(a), should apply for a license under 10 CFR 32.26 and for a certificate of registration in accordance with 10 CFR 32.210.

4. Certain industrial devices

- a. Except for persons who manufacture, process, produce, or initially transfer for sale or distribution industrial devices containing byproduct material designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing an ionized atmosphere, any person is exempt from the requirements for a license set forth in this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires byproduct material, in these certain detecting, measuring, gauging, or controlling devices and certain devices for producing an ionized atmosphere, and manufactured, processed, produced, or initially transferred in accordance with a specific license issued under R9-7-311 of this Article, which license authorizes the initial transfer of the device for use under this section. This exemption does not cover sources not incorporated into a device, such as calibration and reference sources.
- b. Any person who desires to manufacture, process, produce, or initially transfer, for sale or distribution, industrial devices containing byproduct material for use under ~~paragraph (1) of this subsection (B)(4)(a),~~ shall apply for a license described in R9-7-311 and for a certificate of registration in accordance with 10 CFR 32.210.

C. Exempt quantities

1. Except as provided in subsections (C)(2), (3), and (7), a person is exempt from this Chapter if the person receives, possesses, uses, transfers, owns, or acquires radioactive material in individual quantities each of which does not exceed the applicable quantity set forth in Exhibit B of this Article.

2. This subsection does not authorize the production, packaging, or repackaging or transfer of radioactive material for purposes of commercial distribution, or the incorporation of radioactive material into products intended for commercial distribution.
3. Except as specified in this subsection, a person shall not, for purposes of commercial distribution, transfer radioactive material in the individual quantities set forth in Exhibit B of this Article, knowing or having reason to believe the described quantities of radioactive material will be transferred to persons exempt under subsection (C) or equivalent regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State. A person may transfer radioactive material for commercial distribution under a specific license issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.18 which license states that the radioactive material may be transferred by the licensee to persons exempt under this subsection or the equivalent regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State.
4. Sources containing exempt quantities of radioactive material shall not be bundled or placed in close proximity for the purpose of using the radiation from the combined sources in place of a single source, containing a licensable quantity of radioactive material.
5. Possession and use of bundled or combined sources containing exempt quantities of radioactive material in unregistered devices by persons exempt from licensing is prohibited.
6. Any person, who possesses radioactive material received or acquired before September 25, 1971, under the general license issued under R9-7-311(A) of this Article or similar general license of an Agreement State or the NRC, is exempt from the requirements for a license issued under R9-7-311(A) of this Article to the extent that this person possesses, uses, transfers, or owns radioactive material.
7. No person may, for purposes of producing an increased radiation level, combine quantities of radioactive material covered by the exemption described in subsection (C)(6) so that the aggregate quantity exceeds the limits set forth in Exhibit B, except for radioactive material combined within a device placed in use before May 3, 1999, or as otherwise permitted by the rules in this Section.

R9-7-304. License Types

- A.** Activities requiring license. Except as provided in 10 CFR 30.3 (revised January 1, 2013, incorporated by reference, and available under R9-7-101; this incorporated material contains no future editions or amendments), ~~this Section~~ in subsection (B)(1), and for persons exempt as provided in R9-7-302 and R9-7-303 of this Article, no person shall manufacture, produce, transfer, receive, acquire, own, possess, or use byproduct material except as authorized in a specific or general license issued in accordance with the regulations in this chapter and in accordance with 10 CFR 30.3.
- B.** Licenses for radioactive materials are of two types: general and specific.
1. A general license is provided by rule, grants authority to a person for certain activities involving radioactive material, and is effective without the filing of an application with the Department or the issuance of a licensing document to a particular person. However, registration with the Department may be required by the particular general license.
 2. The Department issues a specific license to a named person who has filed an application for a license under the applicable provision of this Chapter. A specific licensee is subject to all of the applicable rules in this Chapter and any limitation contained in the license document.

R9-7-305. General Licenses – Source Material

- A.** This subsection grants a general license that authorizes commercial and industrial firms; research, educational, and medical institutions; and state and local government agencies to use, and transfer not more than 6.8 kg (15 pounds) of source material at any one time for research, development, educational, commercial, or operational purposes. A person authorized under this subsection shall not receive more than 68.2 kg (150 pounds) of source material in one calendar year.
- B.** A person who receives, possesses, uses, or transfers source material under a general license granted under subsection (A) is exempt from the provisions of 9 A.A.C. 7, Article 4 and Article 10, provided the receipt, possession, use, or transfer is within the terms of the general license. This exemption does not apply to any person who is also in possession of source material under a specific license issued under this Article.
- C.** This subsection grants a general license that authorizes a person to receive acquire, possess, use, or transfer depleted uranium contained in industrial products and devices provided:
1. The depleted uranium is contained in the industrial product or device for the

purpose of providing a concentrated mass in a small volume of the product or device;

2. The industrial products or devices have been manufactured or initially transferred in accordance with a specific license governed by ~~R9-7-311(M)~~ R9-7-311(J), or a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State that authorizes manufacture of the products or devices for distribution to persons generally licensed by the U.S. Nuclear Regulatory Commission or an Agreement State;
 3. The person files an ARRA 23 “Registration Certificate -- Use of Depleted Uranium Under General License” with the Department. The person shall provide the information requested on the certificate and listed in Exhibit E. The person shall submit the information within 30 days after first receipt or acquisition of the depleted uranium, returning the completed registration certificate to the Department. The person shall report in writing to the Department any change in information originally submitted to the Department on ARRA 23. The person shall submit the change report within 30 days after the effective date of the described change.
- D.** A person who receives, acquires, possesses, or uses depleted uranium according to the general license provided under subsection (C) shall:
1. Not introduce depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium;
 2. Not abandon the depleted uranium;
 3. Transfer the depleted uranium as prescribed in R9-7-318. If the transferee receives the depleted uranium under a general license established by subsection (C), the transferor shall furnish the transferee with a copy of this Section and a copy of the registration certificate. If the transferee receives the depleted uranium under a general license governed by a regulation of the U.S. Nuclear Regulatory Commission or an Agreement State that is equivalent to subsection (C), the transferor shall furnish the transferee a copy of the equivalent rule and a copy of the registration certificate, accompanied by a letter explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or an Agreement State under requirements substantially similar to those in this Section;

4. Within 30 days of any transfer, report in writing to the Department the name and address of the person receiving the depleted uranium; and
 5. Not export depleted uranium except under a license issued by the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 110.
- E.** A person who receives, acquires, possesses, uses, or transfers depleted uranium in accordance with a general license granted under subsection (C) is exempt from the requirements of 9 A.A.C. 7, Articles 4 and 10 with respect to the depleted uranium covered by that general license.

R9-7-306. General License - Radioactive Material Other Than Source Material

- A.** Certain measuring, gauging or controlling devices and certain devices for producing light or an ionized atmosphere.
1. This subsection grants a general license to a commercial or industrial firm; a research, educational or medical institution; an individual conducting business; or a state or local government agency to receive, acquire, possess, use, or transfer radioactive material contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere, according to the provisions of 10 CFR 31.5(b), (c), and (d), (Revised January 1, 2013, incorporated by reference, and available under R9-7-101. The incorporated material contains no future editions or amendments.
 2. A general licensee shall receive a device from one of the specific licensees described in this Section or through a transfer made under subsection (A)(4)(k).
 3. A general license in subsection (A)(1) applies only to radioactive material contained in devices that have been manufactured or initially transferred and labeled in accordance with the requirements contained in:
 - a. A specific license issued under R9-7-311(A), or
 - b. An equivalent specific license issued by the NRC or another Agreement State.
 - c. An equivalent specific license issued by a State with rules or regulations comparable to this Section.
 4. A person who acquires, receives, possesses, uses, or transfers radioactive material in a device licensed under subsection (A)(1) or through a transfer made

under subsection (A)(4)(h), shall:

- a. Ensure that all labels and safety statements affixed to a device at the time of receipt and bearing a statement that removal of the label is prohibited are maintained and not removed, and comply with all instructions and precautions on the labels.
- b. Ensure that the device is tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at other intervals as specified on the label.
 - i. A general licensee need not test a device that contains only krypton for leakage of radioactive material; and
 - ii. A general licensee need not test a device for leakage of radioactive material if the device contains only tritium, not more than 3.7 megabecquerels (100 microcuries) of other beta and/or gamma emitting material, or 370 kilobecquerels (10 microcuries) of alpha emitting material, or the device is held in storage, in the original shipping container, before initial installation.
- c. Ensure that the tests required by subsection (A)(4)(b) and other testing, installation, servicing, and removal from installation involving the radioactive material or its shielding or containment, are performed:
 - i. In accordance with the device label instructions, or
 - ii. By a person holding a specific license under R9-7-311(A) or in accordance with the provisions of a specific license issued by the NRC or an Agreement State which authorizes distribution of devices to persons generally licensed by the NRC or an Agreement State.
- d. Maintain records of compliance with the requirements in subsections (A)(4)(b) and (c) that show the results of tests; the dates that required activities were performed, and the names of persons performing required activities involving radioactive material from the installation and its shielding or containment. The records shall be maintained for three years from the date of the recorded event or until transfer or disposal of the device.

- e. Immediately suspend operation of a device if there is a failure of, or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on-off mechanism or indicator, or upon the detection of 185 becquerel (0.005 microcurie) or more of removable radioactive material.
 - i. A general licensee shall not operate the device until it has been repaired by the manufacturer or another person holding a specific license to repair this type of device that was issued by the Department under R9-7-311(A), the NRC, or an Agreement State which authorizes distribution of devices to persons generally licensed by the NRC or an Agreement State.
 - ii. If necessary the general licensee shall dispose of the device and any radioactive material from the device by transfer to a person authorized by a specific license to receive the radioactive material in the device or as otherwise approved by the Department.
 - iii. Within 30 days of an event governed by subsection (A)(4)(e) the general licensee shall furnish a report that contains a brief description of the event and the remedial action taken and, in the case of detection of 185 Becquerel (0.005 microcurie) or more of removable radioactive material or failure of or damage to a source likely to result in contamination of the general licensee's facility or the surrounding area, if applicable, a plan for ensuring that the general licensee's facility and surrounding area, if applicable, are acceptable for unrestricted use. The radiological criteria for unrestricted use in R9-7-452 may be used to prepare the plan, as determined by the Department, on a case-by-case basis.
- f. Not abandon a device that contains radioactive material.
- g. Not export a device that contains radioactive material except in accordance with 10 CFR 110, revised January 1, 2013, incorporated by reference, and available under R9-7-101. The incorporated material contains no future editions or amendments.

- h. Transfer or dispose of a device that contains radioactive material only by export as authorized in subsection (A)(4)(g), transfer to another general licensee as authorized in subsection (A)(4)(k) or a person who is authorized to receive the device by a specific license issued by the Department, the NRC, or an Agreement State, or collection as waste if authorized by equivalent regulations of an Agreement State, or the NRC, or as otherwise approved under subsection (A)(4)(j).
- i. Within 30 days after the transfer or export of a device to a specific licensee, furnish a report to the Department. The report shall:
 - i. Identify the device by manufacturer's (or initial transferor's) name, model number, and serial number;
 - ii. Provide the name, address, and license number of the person receiving the device (license number not applicable if exported); and
 - iii. Provide the date of transfer or export.
- j. Obtain written Department approval before transferring a device to any other specific licensee that is not authorized in accordance with subsection (A)(4)(h).
- k. Transfer a device to another general licensee only:
 - i. If the device remains in use at a particular location. The transferor shall provide the transferee with a copy of this Section, a copy of R9-7-443, R9-7-445, and R9-7-448 and any safety documents identified on the device label. Within 30 days of the transfer, the transferor shall report to the Department the manufacturer's (or initial transferor's) name; the model number and the serial number of the device transferred; the transferee's name and mailing address for the location of use; and the name, title, and telephone number of the responsible individual appointed by the transferee in accordance with subsection (A)(4)(n); or
 - ii. If the device is held in storage in the original shipping container at its intended location of use before initial use by a general licensee, and by a person that is not a party to the transaction.

- l. Comply with the provisions of R9-7-443, R9-7-444, R9-7-445, R9-7-447, and R9-7-448 for reporting and notification of radiation incidents, theft or loss of licensed material, and is exempt from the other requirements of 9 A.A.C 7, Articles 4 and 10.
- m. Respond to written requests from the Department to provide information relating to the general license within 30 days from the date on the request, or a longer time period specified in the request. If the general licensee cannot provide the requested information within the specified time period, the general licensee shall request a longer period to supply the information before expiration of the time period, providing the Department with a written justification for the request.
- n. Appoint an individual responsible for knowledge of applicable laws and possessing the authority to take actions required to comply with applicable radiation safety laws. The general licensee, through this individual, shall ensure the day-to-day compliance with applicable radiation safety laws. This provision does not relieve the general licensee of responsibility.
- o. Register, in accordance with subsections (A)(4)(p) and (q), any device that contains at least 370 megabecquerels (10 millicuries) of cesium-137, 3.7 megabecquerels (0.1 millicuries) of strontium-90, 37 megabecquerels (1 millicurie) of cobalt-60, or 37 megabecquerels (1 millicurie) of americium-241 or any other transuranic (i.e., element with atomic number greater than uranium (92)), based on the activity indicated on the label. Each address for a location of use, as described under subsection (A)(4)(q)(iv), represents a separate general licensee and requires a separate registration and fee.
- p. Register each device annually with the Department and pay the fee required by R9-7-1306, Category D4, if in possession of a device that meets the criteria in subsection (A)(4)(o). The general licensee shall register by verifying, correcting, and adding to the information provided in a request for registration received from the Department. The registration information shall be submitted to the Department within 30 days from the date on the request for registration. In addition, a general

- licensee holding devices meeting the criteria of subsection (A)(4)(o) is subject to the bankruptcy notification requirements in R9-7-313(D).
- q. In registering a device, furnish the following information and any other registration information specifically requested by the Department:
- i. Name and mailing address of the general licensee;
 - ii. Information about each device, including the manufacturer (or initial transferor), model number, serial number, radioisotope, and activity (as indicated on the label);
 - iii. Name, title, and telephone number of the responsible individual appointed by the general licensee under subsection (A)(4)(n);
 - iv. Address or location at which each device is used and stored. For a portable device, the address of the primary place of storage;
 - v. Certification by the responsible individual that the information concerning each device has been verified through a physical inventory and review of label information; and
 - vi. Certification by the responsible individual that the individual is aware of the requirements of the general license.
- r. Report a change in mailing address for the location of use or a change in the name of the general licensee to the Department within 30 days of the effective date of the change. For a portable device, a report of address change is only required for a change in the device's primary place of storage.
- s. Not use a device if the device has not been used for a period of two years. If a device with shutters is not being used, the general licensee shall ensure that the shutters are locked in the closed position. The testing required by subsection (A)(4)(b) need not be performed during a period of storage. However, if a device is put back into service or transferred to another person, and has not been tested during the required test interval, the general licensee shall ensure that the device is tested for leakage before use or transfer and that the shutter is tested before use. A device kept in standby for future use is excluded from the two-year time limit in this subsection if the general licensee performs a quarterly physical inventory regarding the standby devices.

5. A person that is generally licensed by an Agreement State with respect to a device that meets the criteria in subsection (A)(4)(o) is exempt from registration requirements if the device is used in an area subject to Department jurisdiction for a period less than 180 days in any calendar year. The Department does not request registration information from a general licensee if the device is exempted from licensing requirements in subsection (A)(4)(o).
6. The general license granted under subsection (A)(1) is subject to the provisions of 9 A.A.C. 7, Articles 1, 3, 12, and 15, and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
7. The general license in subsection (A)(1) does not authorize the manufacture or import of devices containing byproduct material.

B. Luminous safety devices for aircraft

1. This subsection grants a general license that authorizes a person to own, receive, acquire, possess, and use tritium or promethium-147 contained in luminous safety devices for use in aircraft, provided that each device contains not more than 370 gigabecquerels (10 curies) of tritium or 11.1 gigabecquerels (300 millicuries) of promethium-147; and each device has been manufactured, assembled, initially transferred, or imported according to a specific license issued by the U.S. Nuclear Regulatory Commission, or each device has been manufactured or assembled according to the specifications contained in a specific license issued to the manufacturer or assembler of the device by the Department or any Agreement State or Licensing State in accordance with licensing requirements equivalent to those in 10 CFR 32.53.
2. A person who owns, receives, acquires, possesses, or uses a luminous safety device according to the general license granted in subsection (B)(1) is:
 - a. Exempt from the requirements of 9 A.A.C. 7, Article 4 and Article 10 except that the person shall comply with the reporting and notification provisions of R9-7-443, R9-7-444, R9-7-445, R9-7-447, and R9-7-448;
 - b. Not authorized to manufacture, assemble, repair, or import a luminous safety device that contains tritium or promethium-147;
 - c. Not authorized to export luminous safety devices containing tritium or promethium-147;
 - d. Not authorized to own, receive, acquire, possess, or use radioactive

material contained in instrument dials; and

- e. Subject to the provisions of 9 A.A.C. 7, Articles 1, 3, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689.

C. This subsection grants a general license that authorizes a person who holds a specific license to own, receive, possess, use, and transfer radioactive material if the Department issues the license; or special nuclear material if the NRC issues the license. For americium-241, radium-226, and plutonium contained in calibration or reference sources, this subsection grants a general license in accordance with the provisions of subsections (C)(1), (2), and (3). For plutonium, ownership is included in the licensed activities.

- 1. This subsection grants a general license for calibration or reference sources that have been manufactured according to the specifications contained in a specific license issued to the manufacturer or importer of the sources by the U.S. Nuclear Regulatory Commission under 10 CFR 32.57 or 10 CFR 70.39. This general license also governs calibration or reference sources that have been manufactured according to specifications contained in a specific license issued to the manufacturer by the Department, an Agreement State, or a Licensing State, according to licensing requirements equivalent to those contained in 10 CFR 32.57 or 10 CFR 70.39, revised January 1, 2013, incorporated by reference, and available under R9-7-101. The incorporated material contains no future editions or amendments.
- 2. A general license granted under subsection (C) or (C)(1) is subject to the provisions of 9 A.A.C. 7, Articles 1, 3, 4, 10, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689. In addition, a person who owns, receives, acquires, possesses, uses, or transfers one or more calibration or reference sources under a general license granted under subsection (C) or (C)(1) shall:
 - a. Not possess at any one time, at any location of storage or use, more than 185 kBq (5 microcuries) of americium-241, plutonium, or radium-226 in calibration or reference sources;
 - b. Not receive, possess, use, or transfer a calibration or reference source unless the source, or the storage container, bears a label that includes one of the following statements, as applicable, or a substantially similar

statement that contains the same information:

- i. The receipt, possession, use and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of the U.S. Nuclear Regulatory Commission or a state with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label. CAUTION – RADIOACTIVE MATERIAL – THIS SOURCE CONTAINS (name of the appropriate material) – DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

Name of manufacturer or importer

- ii. The receipt, possession, use and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of any Licensing State. Do not remove this label. CAUTION – RADIOACTIVE MATERIAL – THIS SOURCE CONTAINS RADIUM-226. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

Name of manufacturer or importer

- c. Not transfer, abandon, or dispose of a calibration or reference source except by transfer to a person authorized to receive the source by a license from the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State;
 - d. Store a calibration or reference source, except when the source is being used, in a closed container designed, constructed, and approved for containment of americium-241, plutonium, or radium-226 which might otherwise escape during storage; and
 - e. Not use a calibration or reference source for any purpose other than the calibration of radiation detectors or the standardization of other sources.
- 3. The general license granted under subsection (C) or (C)(1) does not authorize the manufacture or import of calibration or reference sources that contain americium-241, plutonium, or radium-226.
 - 4. The general license granted under subsections (C) or (C)(1) does not authorize

the manufacture or export of calibration or reference sources that contain americium-241, plutonium, or radium-226.

- D.** This subsection grants a general license that authorizes a person to receive, possess, use, transfer, own, or acquire carbon-14 urea capsules, which contain one microcurie of carbon-14 urea for “in vivo” human diagnostic use:
1. Except as provided in subsections (D)(2) and (3), a physician is exempt from the requirements for a specific license, provided that each carbon-14 urea capsule for “in vivo” diagnostic use contains no more than 1 microcurie.
 2. A physician who desires to use the capsules for research involving human subjects shall obtain a specific license issued according to the specific licensing requirements in this Article.
 3. A physician who desires to manufacture, prepare, process, produce, package, repackage, or transfer carbon-14 urea capsules for commercial distribution shall obtain a specific license from the Department, issued according to the requirements in 10 CFR 32.21, (Revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.)
 4. Nothing in this subsection relieves physicians from complying with applicable FDA and other federal and state requirements governing receipt, administration, and use of drugs.
- E.** This subsection grants a general license that authorizes any physician, clinical laboratory, or hospital to use radioactive material for certain “in vitro” clinical or laboratory testing.
1. The general licensee is authorized to receive, acquire, possess, transfer, or use, for any of the following stated tests, the following radioactive materials in prepackaged units:
 - a. Iodine-125, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or radiation from such material, to human beings or animals.
 - b. Iodine-131, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.

- c. Carbon-14, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - d. Hydrogen-3 (tritium), in units not exceeding 1.85 megabecquerel (50 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - e. Iron-59, in units not exceeding 740 kilobecquerel (20 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - f. Cobalt-57 or selenium-75, in units not exceeding 370 kilobecquerels (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - g. Mock iodine-125 reference or calibration sources, in units not exceeding 1.85 kBq (50 nanocurie) of iodine-129 and 185 becquerel (5 nanocurie) of americium-241 each, for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
2. A person shall not acquire, receive, possess, use, or transfer radioactive material according to the general license established by this subsection until the person has filed with the Department ARRA-9, “Certificate -- “In Vitro” Testing with Radioactive Material Under General License,” provided the information listed in Exhibit E, and received a validated copy of ARRA-9, which indicates the assigned certification number. The physician, clinical laboratory, or hospital shall furnish on ARRA-9 the following information:
- a. Name, telephone number, and address of the physician, clinical laboratory, or hospital; and
 - b. A statement that the physician, clinical laboratory, or hospital has radiation measuring instruments to carry out “in vitro” clinical or laboratory tests with radioactive material and that tests will be performed

only by personnel competent to use the instruments and handle the radioactive material.

3. A person who receives, acquires, possesses, or uses radioactive material according to the general license granted under this subsection shall:
 - a. Not possess at any one time, in storage or use, a combined total of not more than 7.4 megabecquerels (200 microcuries) of iodine-125, iodine-131, iron-59, cobalt-57, or selenium-75 in excess of 7.4 megabecquerels (200 microcuries), or acquire or use in any one calendar month more than 18.5 megabecquerels (500 microcuries) of these radionuclides.
 - b. Store the radioactive material, until used, in the original shipping container or in a container that provides equivalent radiation protection.
 - c. Use the radioactive material only for the uses authorized by subsection (E).
 - d. Not transfer radioactive material to a person who is not authorized to receive it according to a license issued by the Department, the U.S. Nuclear Regulatory Commission, or any Agreement State or Licensing State, or in any manner other than in an unopened, labeled shipping container received from the supplier.
 - e. Not dispose of a mock iodine-125 reference or calibration source described subsection (E)(1) except as authorized by R9-7-434.
 - f. Package or prepackage a unit bearing a durable, clearly visible label: identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed 0.37 megabecquerel (10 microcuries) of iodine-131, iodine-125, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3 (tritium); or 0.74 megabecquerel (20 microcuries) of iron-59; or Mock Iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 0.185 kilobecquerel (0.005 microcurie) of americium-241 each; or cobalt-57 in units not exceeding 0.37 megabecquerel (10 microcuries).
 - g. Package to display the radiation caution symbol and the words, "Caution, Radioactive Material", and "Not for Internal or External Use in Humans

or Animals.”

4. The general licensee shall not receive, acquire, possess, transfer, or use radioactive material according to subsection (E)(1):
 - a. Except as prepackaged units that are labeled according to the provisions of a specific license issued by the U.S. Nuclear Regulatory Commission, or any Agreement State that authorizes the manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), iron-59, cobalt-57, selenium-75, or mock iodine-125 for distribution to persons generally licensed under subsection (E) or its equivalent federal law; and
 - b. Unless one of the following statements, or a substantially similar statement that contains the same information, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure that accompanies the package:
 - i. This radioactive material may be acquired, received, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from such material, to human beings or animals. The acquisition, receipt, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.

Name of manufacturer
 - ii. This radioactive material shall be acquired, received, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from such material, to human beings or animals. The receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of a Licensing State.

Name of manufacturer

5. A physician, clinical laboratory or hospital that possesses or uses radioactive material under a general license granted by subsection (E):
 - a. Shall report to the Department in writing, any change in the information furnished on the ARRA-9. The report shall be furnished within 30 days after the effective date of the change; and
 - b. Is exempt from the requirements of 9 A.A.C. 7, Article 4 and Article 10 with respect to radioactive material covered by the general license, except that a person using mock iodine-125 sources, described in subsection (E)(1)(g), shall comply with the provisions of R9-7-434, R9-7-443, and R9-7-444 of this Chapter.
 6. For the purposes of subsection (E), a licensed veterinary care facility is considered a “clinical laboratory.”
- F.** This subsection grants a general license that authorizes a person to own, receive, acquire, possess, use, and transfer strontium-90, contained in ice detection devices, provided each device contains not more than 1.85 megabecquerels (50 microcuries) of strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission or each device has been manufactured according to the specifications contained in a specific license issued by the Department or any Agreement State to the manufacturer of the device under licensing requirements equivalent to those in 10 CFR 32.61. A person who receives, owns, acquires, possesses, uses, or transfers strontium-90 contained in ice detection devices under a general license in accordance with subsection (F):
1. Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating, discontinue use of the device until it has been inspected, tested for leakage, and repaired by a person who holds a specific license from the U.S. Nuclear Regulatory Commission or an Agreement State to manufacture or service ice detection devices; or dispose of the device according to the provisions of R9-7-434;
 2. Shall assure that each label, affixed to the device at the time of receipt, which bears a statement that prohibits removal of the labels, maintained on the device; and
 3. Is exempt from the requirements of 9 A.A.C. 7, Article 4 and Article 10, except

that the user of an ice detection device shall comply with the provisions of R9-7-434, R9-7-443, and R9-7-444.

4. Shall not manufacture, assemble, disassemble, repair, or import an ice detection device that contains strontium-90.
 5. Is subject to the provisions of 9 A.A.C. 7, Articles 1, 3, 12, and 15, and A.R.S. §§ 30-654(B), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
- G.** This subsection grants a general license that authorizes a person to acquire, receive, possess, use, or transfer, in accordance with the provisions of subsections (H) and (I), radium-226 contained in the following products manufactured prior to November 30, 2007.
1. Antiquities originally intended for use by the general public. For the purposes of this ~~paragraph~~ subsection, antiquities mean products originally intended for use by the general public and distributed in the late 19th and early 20th centuries, such as radium emanator jars, revigators, radium water jars, radon generators, refrigerator cards, radium bath salts, and healing pads.
 2. Intact timepieces containing greater than 0.037 megabecquerel (1 microcurie), nonintact timepieces, and timepiece hands and dials no longer installed in timepieces.
 3. Luminous items installed in air, marine, or land vehicles.
 4. All other luminous products, provided that no more than 100 items are used or stored at the same location at any one time.
 5. Small radium sources containing no more than 0.037 megabecquerel (1 microcurie) of radium-226. For the purposes of this ~~paragraph~~ subsection, “small radium sources” means discrete survey instrument check sources, sources contained in radiation measuring instruments, sources used in educational demonstrations (such as cloud chambers and spinthariscopes), electron tubes, lightning rods, ionization sources, static eliminators, or as designated by the NRC.
- H.** Persons who acquire, receive, possess, use, or transfer byproduct material under the general license issued in subsection (G) are exempt from the provisions 9 A.A.C. 7, Articles 1, 3, 4, 7, 10, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689, to the extent that the receipt, possession, use, or transfer of byproduct material is within the terms of the general license; provided,

however, that this exemption shall not be deemed to apply to any such person specifically licensed under this chapter. Any person who acquires, receives, possesses, uses, or transfers byproduct material in accordance with the general license in subsection (G):

1. Shall notify the Department should there be any indication of possible damage to the product so that it appears it could result in a loss of the radioactive material. A report containing a brief description of the event, and the remedial action taken, must be furnished to the Department within 30 days.
 2. Shall not abandon products containing radium-226. The product, and any radioactive material from the product, may only be disposed of according to Article 4 or by transfer to a person authorized by a specific license to receive the radium-226 in the product or as otherwise approved by the Department.
 3. Shall not export products containing radium-226 except in accordance with 10 CFR 110 revised January 1, 2013, incorporated by reference, and available under R9-7-101. The incorporated material contains no future editions or amendments.
 4. Shall dispose of products containing radium-226 at a disposal facility authorized to dispose of radioactive material in accordance with any federal or state solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005, by transfer to a person authorized to receive radium-226 by a specific license issued under Article 3, equivalent regulations of an Agreement State, or the NRC.
 5. Shall respond to written requests from the Department to provide information relating to the general license within 30 calendar days of the date of the request, or other time specified in the request. If the general licensee cannot provide the requested information within the allotted time, it shall, within that same time period, request a longer period to supply the information by providing the Department Director a written justification for the request.
- I. The general license in subsection (G) does not authorize the manufacture, assembly, disassembly, repair, or import of products containing radium-226, except that timepieces may be disassembled and repaired.

R9-7-311. Special Requirements for a Specific License to Manufacture, Assemble, Repair, or Distribute Commodities, Products, or Devices that Contain Radioactive Material

- A. Licensing the manufacture and distribution of devices to persons generally licensed under

R9-7-306(A).

1. The Department shall grant a specific license to manufacture or distribute each device that contains radioactive material, excluding special nuclear material, to persons generally licensed under R9-7-306(A) or equivalent regulations of the U.S. NRC, an Agreement State, or the Licensing State if:
 - a. The applicant satisfies the requirements of R9-7-309;
 - b. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:
 - i. The device can be safely operated by persons not having training in radiological protection;
 - ii. Under ordinary conditions of handling, storage, and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive a dose in excess of 10 percent of the limits specified in R9-7-408; and
 - iii. Under accident conditions (such as fire and explosion) associated with handling, storage, and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:
 - (1) Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye: 150 mSv (15 rem)
 - (2) Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than 1 square centimeter; 2 Sv (200 rem)
 - (3) Other organs: 500 mSv (50 rem)
 - c. Each device bears a durable, legible, clearly visible label or labels that contain in a clearly identified and separate statement:
 - i. Instructions and precautions necessary to assure safe installation, operating, and servicing of the device (documents such as operating and service manuals may be identified in the label and used to provide this information);

- ii. The requirement, or lack of requirement, for leak testing, or for testing any on-off mechanism and indicator, including the maximum time interval for the testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and
- iii. The information called for in one of the following statements in the same or substantially similar form:

The receipt, possession, use, and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent and the regulations of the U.S. Nuclear Regulatory Commission or a state with which the Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION – RADIOACTIVE MATERIAL

(name of manufacturer or distributor)

The receipt, possession, use and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent, and the regulations of a Licensing State. This label shall be maintained on the device in a legible condition.

Removal of this label is prohibited.

CAUTION – RADIOACTIVE MATERIAL

(name of manufacturer or distributor)

- d. The model, serial number, and name of manufacturer or distributor may be omitted from the label if the information location is specified in labeling affixed to the device;
- e. Each device with a separable source housing that provides the primary shielding for the source also bears, on the source housing, a durable label that provides the device model number and serial number, the isotope and quantity, the words, “Caution-Radioactive Material,” the radiation symbol described in R9-7-428, and the name of the manufacturer or

- initial distributor; and
- f. Each device meets the criteria in 10 CFR 31.5(c)(13)(i) (revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments) and bears a permanent (e.g., embossed, etched, stamped, or engraved) label affixed to the source housing, if separable, or the device if the source housing is not separable, that includes the words, "Caution-Radioactive Material," and, if practicable, the radiation symbol described in R9-7-428.
 - g. The device has been registered in the Sealed Source and Device Registry.
2. In the event the applicant desires that the device undergo mandatory testing at intervals longer than six months, either for proper operation of the on-off mechanism and indicator, if any, or for leakage of radioactive material or for both, the application shall contain sufficient information to demonstrate that the longer interval is justified by performance characteristics of the device or similar devices and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the on-off mechanism and indicator. In determining the acceptable interval for the test for leakage of radioactive material, the Department shall consider information which includes, but is not limited to:
 - a. Primary containment (source capsule),
 - b. Protection of primary containment,
 - c. Method of sealing containment,
 - d. Containment construction materials,
 - e. Form of contained radioactive material,
 - f. Maximum temperature withstood during prototype tests,
 - g. Maximum pressure withstood during prototype tests,
 - h. Maximum quantity of contained radioactive material,
 - i. Radiotoxicity of contained radioactive material, and
 - j. Operating experience with identical devices or similarly designed and constructed devices.
 3. In the event the applicant desires that the general licensee under R9-7-306(A), or under equivalent regulations of the NRC or an Agreement State or Licensing

State, be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on-off mechanism and indicator, or remove the device from installation, the application shall include written instructions to be followed by the general licensee, estimated calendar quarter doses associated with the activity or activities, and bases for the estimates. The submitted information shall demonstrate that performance of the activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive a dose in excess of 10 percent of the limits specified in R9-7-408.

4. A licensee authorized under subsection (A) to distribute a device to a generally licensed person shall provide, if a device that contains radioactive material is to be transferred for use under the general license granted in R9-7-306(A), the name of each person that is licensed under R9-7-311(A) and the information specified in this subsection for each person to whom a device will be transferred. The licensee shall provide this information before the device may be transferred. In the case of transfer through another person, the licensee shall provide the listed information to the intended user before initial transfer to the other person.
 - a. The licensee shall provide:
 - i. A copy of the general license, issued under R9-7-306(A),
 - ii. A copy of R9-7-443 and R9-7-445,
 - iii. A list of the services that can only be performed by a specific licensee,
 - iv. Information on authorized disposal options, including estimated costs of disposal, and
 - v. A list of civil penalties for improper disposal.
 - b. The licensee shall:
 - i. Report on a quarterly basis to the responsible Agreement State or NRC all transfers of devices to persons for use under a general license in accordance with 10 CFR 32.52, revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

- ii. Maintain all information concerning transfers and receipts of devices that supports the reports required by subsection ~~(A)(4)(b)~~ (A)(4)(b)(i).
 - iii. Maintain records required by subsection ~~(A)(4)(b)~~ (A)(4)(b)(i) for a period of three years following the date of the recorded event.
- 5. If radioactive material is to be transferred in a device for use under an equivalent general license of the NRC or another Agreement State, each person that is licensed under R9-7-304(B) shall provide the information specified in this subsection to each person to whom a device will be transferred. The licensee shall provide this information before the device is transferred. In the case of transfer through another person, the licensee shall provide the listed information to the intended user before initial transfer to the other person. The licensee shall provide:
 - a. A copy of the Agreement State's requirements that are equivalent to R9-7-306(A), ~~and A.R.S. §§ 30-657~~, R9-7-443, and R9-7-445, and to A.R.S. § 30-657. If a copy of NRC regulations is provided to a prospective general licensee in lieu of the Agreement State's requirements, the licensee shall explain in writing that use of the device is regulated by the Agreement State. If certain requirements do not apply to a particular device, the licensee may omit the requirement from the material provided;
 - b. A list of the services that can only be performed by a specific licensee;
 - c. Information on authorized disposal options, including estimated costs of disposal; and
 - d. The name, title, address, and telephone number of the individual at the Agreement State regulatory agency who can provide additional information.
- 6. A licensee may propose to the Department an alternate method of informing the customer.
- 7. If a licensee has notified the Department of bankruptcy under R9-7-313(E) or is terminating under R9-7-319, the licensee shall provide, upon request, to the Department, the NRC, or another Agreement State, records of the disposition as

required under A.R.S. § 30-657.

8. A licensee authorized to transfer a device to a generally licensed person, shall comply with the following requirements:
 - a. The person licensed under subsection (A) shall report all transfers of devices to persons for use under a general license obtained under R9-7-306(A), and all receipts of devices from persons licensed under R9-7-306(A) to the Department, the NRC, or other affected Agreement State. The report shall be submitted on a quarterly basis, in a clear and legible form, and contain the following information:
 - i. The identity of each general licensee by name and mailing address for the location of use. If there is no mailing address for the location of use, the person licensed under subsection (A) shall submit an alternate address for the general licensee, along with information on the actual location of use;
 - ii. The name, title, and telephone number of a person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the applicable laws;
 - iii. The date of transfer;
 - iv. The type, model number, and serial number of the device transferred; and
 - v. The quantity and type of radioactive material contained in the device.
 - b. If one or more intermediaries will temporarily possess the device at the intended place of use before its possession by the intended user, the report shall include the information required of the general licensee in subsection (A)(4) for both the intended user and each intermediary, clearly identifying the intended user and each intermediary.
 - c. For devices received from a general licensee, licensed under R9-7-306(A), the report shall include:
 - i. The identity of the general licensee by name and address;
 - ii. The type, model number, and serial number of the device received;
 - iii. The date of receipt; and

- iv. In the case of a device not initially transferred by the reporting licensee, the name of the manufacturer or initial transferor.
 - d. If the person licensed under subsection (A) makes a change to a device possessed by a general licensee so that the label must be changed to update required information, the report shall identify the general licensee, the device, and the changes to information on the device label.
 - e. The report shall cover a calendar quarter, be filed within 30 days of the end of each calendar quarter, and clearly indicate the period covered by the report.
 - f. The report shall clearly identify the person licensed under subsection (A) submitting the report and include the license number of the license.
 - g. If no transfers are made to or from persons generally licensed under R9-7-306(A) during a reporting period, the person licensed under subsection (A) shall submit a report indicating the lack of activity.
 - 9. The licensee shall maintain records of all transfers for Department inspection. Records shall be maintained for three years after termination of the license to manufacture the generally licensed devices regulated under R9-7-306(A).
- B.** The Department shall grant a specific license to manufacture, assemble, repair, or initially transfer luminous safety devices that contain tritium or promethium-147 for use in aircraft, for distribution to persons generally licensed under R9-7-306(B), if the applicant satisfies:
- 1. The general requirements specified in R9-7-309; and
 - 2. The requirements of 10 CFR 32.53 through 32.56 revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
- C.** The Department shall grant a specific license to manufacture or initially transfer calibration or reference sources that contain americium-241, radium-226, or plutonium for distribution to persons generally licensed under R9-7-306(C) if the applicant satisfies:
- 1. The general requirements of R9-7-309; and
 - 2. The requirements of 10 CFR 32.57, 32.58, 32.59, and 70.39, revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
- D.** The Department shall grant a specific license to distribute radioactive material for use by

a physician under the general license in R9-7-306(D) if:

1. The general requirements of R9-7-309; and
2. The requirements of 10 CFR 32.57, 32.58, 32.59, and 70.39, revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

E. The Department shall grant for a specific license to manufacture or distribute radioactive material for use under the general license of R9-7-306(E) if:

1. The applicant satisfies the general requirements specified in R9-7-309.
2. The radioactive material is to be prepared for distribution in prepackaged units of:
 - a. Iodine-125 in units not exceeding 370 kBq (10 microcuries) each;
 - b. Iodine-131 in units not exceeding 370 kBq (10 microcuries) each;
 - c. Carbon-14 in units not exceeding 370 kBq (10 microcuries) each;
 - d. Hydrogen-3 (tritium) in units not exceeding 1.85 MBq (50 microcuries) each;
 - e. Iron-59 in units not exceeding 740 kBq (20 microcuries) each;
 - f. Cobalt-57 or selenium-75 in units not exceeding 370 kilobecquerels (10 microcuries) each;
 - g. Mock iodine-125 in units not exceeding 1.85 kBq (50 nanocuries) of iodine-129 and 185 Bq (5 nanocuries) of americium-241 each.
3. Each prepackaged unit bears a durable, clearly visible label:
 - a. Identifying the radioactive contents as to chemical form and radionuclide and indicating that the amount of radioactivity does not exceed 370 kilobecquerels (10 microcuries) of iodine-125, iodine-131, cobalt-57, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3 (tritium); 740 kilobecquerels (20 microcuries) of iron-59; or mock iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 185 becquerels (0.005 microcurie) of americium-241 each; and
 - b. Displaying the radiation caution symbol described in R9-7-428, the words, "CAUTION, RADIOACTIVE MATERIAL," and the phrase "Not for Internal or External Use in Humans or Animals."
4. One of the following statements, or a substantially similar statement that contains

the information called for in the following statements appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure that accompanies the package:

- a. This radioactive material may be received, acquired, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from the radioactive material, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.

Name of Manufacturer

- b. This radioactive drug may be received, acquired, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from the radioactive material, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of a Licensing State.

Name of Manufacturer

5. The label affixed to the unit, or the leaflet or brochure that accompanies the package, contains adequate information about the precautions to be observed in handling and storing the specified radioactive material. In the case of the mock iodine-125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in R9-7-434.
- F.** The Department shall grant for a specific license to manufacture and distribute ice detection devices to persons generally licensed under R9-7-306(F) if the applicant satisfies:
1. The general requirements of R9-7-309; and

2. The criteria of 10 CFR 32.61 and 32.62, revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
- G.** The Department shall grant a specific license to manufacture, prepare, or transfer for commercial distribution radioactive drugs that contain radioactive material for use by a person authorized in accordance with Article 7 of this Chapter, if the applicant meets all of the requirements in 10 CFR 30.32(j) or 10 CFR 32.72, revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
1. Authorization under this Section to produce Positron Emission Tomography (PET) radioactive drugs for noncommercial transfer to medical use licensees in its consortium does not relieve the licensee from complying with applicable FDA, other federal, and state requirements governing radioactive drugs.
 2. Each licensee authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall:
 - a. Satisfy the labeling requirements in R9-7-431 for each PET radioactive drug transport radiation shield and each syringe, vial, or other container used to hold a PET radioactive drug intended for noncommercial distribution to members of its consortium.
 - b. Possess and use instrumentation to measure the radioactivity of the PET radioactive drugs intended for noncommercial distribution to members of its consortium and meet the procedural, radioactivity measurement, instrument test, instrument check, and instrument adjustment requirements in R9-7-449.
 3. A licensee that is a pharmacy authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall require that any individual who prepares PET radioactive drugs be an:
 - a. Authorized nuclear pharmacist that meets the requirements in R9-7-712,
or
 - b. Individual under the supervision of an authorized nuclear pharmacist as specified in R9-7-706.
 4. A pharmacy, authorized under this Section to produce PET radioactive drugs for

noncommercial transfer to medical use licensees in its consortium that allows an individual to work as an authorized nuclear pharmacist, shall meet the requirements of R9-7-712.

- H.** The Department shall grant a specific license to manufacture and distribute generators or reagent kits that contain radioactive material for preparation of radiopharmaceuticals by persons licensed according to 9 A.A.C. 7, Article 7 if:
1. The applicant satisfies the general requirements of R9-7-309;
 2. The applicant submits evidence that:
 - a. The generator or reagent kit is to be manufactured, labeled and packaged according to the Federal Food, Drug, and Cosmetic Act or the Public Health Service Act, a new drug application (NDA) approved by the Food and Drug Administration (FDA), a biologic product license issued by FDA, or a “Notice of Claimed Investigational Exemption for a New Drug” (IND) that has been accepted by the FDA; or
 - b. The manufacture and distribution of the generator or reagent kit are not subject to the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act.
 3. The applicant submits information on the radionuclide; chemical and physical form, packaging including maximum activity per package, and shielding provided by the packaging of the radioactive material contained in the generator or reagent kit;
 4. The label affixed to the generator or reagent kit contains information on the radionuclide, including quantity, and date of assay; and
 5. The label affixed to the generator or reagent kit, or the leaflet or brochure that accompanies the generator or reagent kit, contains:
 - a. Adequate information, from a radiation safety ~~stand point~~ standpoint, on the procedures to be followed and the equipment and shielding to be used in eluting the generator or processing radioactive material with the reagent kit; and
 - b. A statement that this generator or reagent kit (as appropriate) is approved for use by persons licensed by the Department under 9 A.A.C. 7, Article 7 or equivalent licenses of the U.S. Nuclear Regulatory Commission or an Agreement State or Licensing State. The labels, leaflets or brochures

required by this subsection supplement the labeling required by FDA and they may be separate from or, with the approval of FDA, combined with the labeling required by FDA.

- I. The Department shall grant a specific license to manufacture and distribute sources and devices that contain radioactive material to a person licensed in accordance with Article 7 of this Chapter for use as a calibration, transmission, or reference source or for medical purposes, if the applicant meets all of the requirements in 10 CFR 32.74, revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
- J. Requirements for license to manufacture and distribute industrial products containing depleted uranium for mass volume applications.
 - 1. The Department shall grant a specific license to manufacture industrial products and devices that contain depleted uranium for use under R9-7-305(C) or equivalent regulations of the U.S. Nuclear Regulatory Commission or an Agreement State if:
 - a. The applicant satisfies the general requirements in R9-7-309;
 - b. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive a radiation dose in excess of 10 percent of the limits specified in R9-7-408.
 - c. The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.
 - 2. In the case of an industrial product or device whose unique benefits are questionable, the Department shall approve an application for a specific license under this subsection only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.

3. The Department may deny any application for a specific license under this subsection if the end use or uses of the industrial product or device cannot be reasonably foreseen.
4. Each person licensed under subsection (J)(1) shall:
 - a. Maintain the level of quality control required by the license in the manufacture of the industrial product or device and the installation of the depleted uranium into the product or device;
 - b. Label or mark each unit to:
 - i. Identify the manufacturer of the product or device, the number of the license under which the product or device was manufactured or initially transferred, the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and
 - ii. State that the receipt, possession, use, and transfer of the product or device are subject to a general license or the equivalent and the regulations of the U.S. Nuclear Regulatory Commission or an Agreement State;
 - c. Assure that the depleted uranium, before being installed in each product or device, has been impressed with the following legend, clearly legible through any plating or other covering: “Depleted Uranium”;
 - d. Furnish a copy of the general license contained in R9-7-305(C) and a copy of ARRA-23 to each person to whom depleted uranium in a product or device is transferred for use under a general license contained in R9-7-305(C); or
 - e. Furnish a copy of the general license contained in the U.S. Nuclear Regulatory Commission’s or Agreement State’s regulation equivalent to R9-7-305(C) and a copy of the U.S. Nuclear Regulatory Commission’s or Agreement State’s certificate, or alternatively, furnish a copy of the general license contained in R9-7-305(C) and a copy of ARRA-23 to each person to whom depleted uranium in a product or device is transferred for use under a general license of the U.S. Nuclear Regulatory Commission or an Agreement State, with a document explaining that use of the product or device is regulated by the U.S.

- Nuclear Regulatory Commission or an Agreement State under requirements substantially the same as those in R9-7-305(C);
- f. Report to the Department all transfers of industrial products or devices to persons for use under the general license in R9-7-305(C). The report shall identify each general licensee by name and address, an individual by name or position who serves as the point of contact person for the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under R9-7-305(C) during the reporting period, the report shall so indicate;
- i. Report to the U.S. Nuclear Regulatory Commission all transfers of industrial products or devices to persons for use under the U.S. Nuclear Regulatory Commission general license in 10 CFR 40.25; or
- ii. Report to the responsible state agency all transfers of devices manufactured and distributed under subsection (J)(4)(f) for use under a general license in that state's regulations equivalent to R9-7-305(C);
- iii. The report required in subsection (J)(4)(f)(i) or (ii) shall identify each general licensee by name and address, an individual by name or position who serves as the contact person for the general licensee, the type and model number of the device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which a product or device is transferred to the generally licensed person;
- iv. If no transfers have been made to U.S. Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the U.S. Nuclear Regulatory Commission;

- v. If no transfers have been made to general licensees within a particular Agreement State during the reporting period, this information shall be reported to the responsible Agreement state agency; and
- vi. Keep records showing the name, address, and contact person for each general licensee to whom depleted uranium in industrial products or devices is transferred for use under a general license provided in R9-7-305(C) or equivalent regulations of the U.S. Nuclear Regulatory Commission or of an Agreement State. The records shall be maintained for a period of three years and show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the reporting requirements of this Section.

- K.** A licensee who manufactures nationally tracked sources, as defined in Article 4, shall:
 - 1. Serialize the sources in accordance with 10 CFR 32.201, revised January 1, 2013, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments; and
 - 2. Report manufacturing activities in accordance with R9-7-454.

R9-7-313. Specific Terms and Conditions

- A.** Each license issued under this Article is subject to all provisions of A.R.S. Title 30, Chapter 4 and to all rules, regulations, and orders of the Department.
- B.** A licensee shall not transfer, assign, or in any manner dispose of a license issued or granted under this Article or a right to possess or utilize radioactive material granted by any license issued under this Article unless the Department finds that the transfer is consistent with the Department's statutes and rules, and gives its consent in writing. An application for transfer of license must include:
 - 1. The identity, technical and financial qualifications of the proposed transferee; and
 - 2. Financial assurance for decommissioning information required by R9-7-323.
- C.** Each person licensed by the Department under this Article shall confine the use and possession of the material licensed to the locations and purposes authorized in the license.
- D.** Each license issued pursuant to the rules in Articles 3, 5, 7, and 15 of this Chapter shall be deemed to contain the provisions set forth in the Act, whether or not these provisions are expressly set forth in the license.

- E.** The Department may incorporate, in any license issued pursuant to the rules in this Chapter, at the time of issuance, or thereafter by appropriate rule, regulation or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use and transfer of byproduct material as it deems appropriate or necessary in order to:
1. Promote the common defense and security;
 2. Protect health or to minimize danger to life or property;
 3. Protect restricted data; or
 4. Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be necessary or appropriate to effectuate the purposes of the Act and rules thereunder.
- F.** Licensees required to submit emergency plans in accordance with R9-7-322 shall follow the emergency plan approved by the Department. The licensee may change the approved plan without Department approval only if the changes do not reduce the commitment of the plan. The licensee shall furnish the change to the Department and to affected offsite response organizations within six months after the change is made. Proposed changes that reduce, or potentially reduce, the commitment of the approved emergency plan may not be implemented without prior application to and prior approval by the Department.
- G.** Each person licensed under this Section and each general licensee that is required to register under R9-7-306(A)(4)(o) shall notify the Department in writing if the licensee decides to permanently discontinue any or all activities involving materials authorized under the license. A specific licensee or general licensee shall notify the Department, in writing:
1. Immediately following the filing of a petition for bankruptcy under any Chapter of Title 11 of the United States Code if the petition for bankruptcy is by or against:
 - a. The licensee;
 - b. An entity (as defined in the bankruptcy code) controlling the licensee or listing the license or licensee as property of the estate; or
 - c. An affiliate (as defined in the bankruptcy code) of the licensee.
 2. Providing the following information:
 - a. The bankruptcy court in which the petition for bankruptcy was filed, and
 - b. The bankruptcy case title and number, and
 - c. The date the petition was filed.
- H.** Each licensee preparing technetium-99m radiopharmaceuticals from molybdenum-99/technetium-99m generators or rubidium-82 from

strontium-82/rubidium-82 generators shall test the generator eluates for molybdenum-99 breakthrough or strontium-82 and strontium-85 contamination, respectively, in accordance with R9-7-720. The licensee shall record the results of each test and retain each record for three years after the record is made.

I. Inalienability of Licenses

1. No license issued or granted pursuant to the regulations in this part shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person, unless the Department, after securing full information, finds that the transfer is in accordance with the provisions of this act and gives its consent in writing.
2. An application for transfer of license must include:
 - a. The identity, technical and financial qualifications of the proposed transferee;
and
 - b. Financial assurance for decommissioning information required by R9-7-323, 10 CFR 40.3 and 10 CFR 70.25.

R9-7-323. Financial Assurance and Recordkeeping for Decommissioning

A. For purposes of terminating specific licensed activities:

1. “Decommissioning” means to remove a radioactive material use facility safely from service and to reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the radioactive material use license.
2. “Byproduct material” as used in 10 CFR 30, means “radioactive material” which is defined in A.R.S. § 30-651.
3. “Facility” means the entire site of radioactive material use, or any separate building or outdoor area where it is used.
4. “Appendix B to Part 30” as used in 10 CFR 30, means Appendix E in 9 A.A.C. 7, Article 4.
5. “Financial security” means having a net worth of not less than \$10,000.

B. When applying, each non-government applicant for a specific license that authorizes the possession and use of radioactive material, and each non-government holder of a license to possess and use radioactive material issued before the effective date of this Section, shall submit to the Department a decommissioning funding plan or certification of

financial security, as required in A.R.S. § 30-672(H). A licensee required to meet the requirements in subsection (C) is exempt from the requirements in this subsection.

C. When applying, each applicant for a specific license that authorizes the possession and use of radioactive material, and each holder of a license to possess and use radioactive material issued before the effective date of this Section, shall submit to the Department a decommissioning funding plan or certification of financial assurance that meets the requirements in 10 CFR 30.35, 40.36, and 70.25, revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments. Each decommissioning funding plan shall be submitted to the Department for review and approval and shall contain:

- ~~1.~~ A a detailed cost estimate for decommissioning, in an amount reflecting:
 - ~~a.1.~~ The cost of an independent contractor to perform all decommissioning activities;
 - ~~b.2.~~ The cost of meeting the R9-7-452(B) criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of ~~R9-7-453(C)~~ R9-7-452(C), the cost estimate may be based on meeting the ~~R9-7-453(C)~~ R9-7-452(C) criteria;
 - ~~c.3.~~ The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination; ~~and~~
 - ~~d.4.~~ An adequate contingency factor. The ability to meet the provisions of this Section, for which the cost estimate may be based on meeting the criteria specified in this Section; and
- 5. An adequate contingency factor, including:
 - ~~2.a.~~ Identification of and justification for using the key assumptions contained in the DCE;
 - ~~3.b.~~ A description of the method of assuring funds for decommissioning including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;
 - ~~4.c.~~ A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and
 - ~~5.d.~~ An original signed copy of the financial instrument obtained to satisfy the requirements of subsection (F) unless a previously submitted and accepted financial instrument continues to cover the cost estimate for

decommissioning).

- D.** Each licensee required to provide financial assurance for decommissioning a radioactive material facility under this Section shall maintain records of information important to the safe and effective decommissioning of the facility in an identified location until the license is terminated by the Department. The licensee shall maintain the following records during the decommissioning process:
1. Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, and site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. The licensee shall keep records identifying the involved radionuclides and associated quantities, forms, and concentrations.
 2. As-built drawings showing modifications of structures and equipment in restricted areas where radioactive materials are used and stored, and locations of possible inaccessible contamination. If drawings are not available, the licensee shall provide appropriate records describing each location of possible contamination.
 3. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.
- E.** Decommissioning procedures:
1. Upon expiration or termination of principal activities a licensee shall notify the Department in writing whether the licensee is discontinuing licensed activities. The licensee shall begin decommissioning its facility within 60 days after the Department receives notice of the decision to permanently terminate principal activities, or within 12 months after receipt of notice, submit to the Department a decommissioning plan, as prescribed in 10 CFR 30.36(g)(1), 40.42(g)(1), and 70.38(g)(1), revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments. The licensee shall begin decommissioning upon approval of the plan if the license has expired or no licensed activities have been conducted at the licensee's facility for a period of 24 months.

2. In addition to the notification requirements in subsection (E)(1), the licensee shall maintain in effect all decommissioning financial assurances required by this Section. The financial assurances shall be increased or may be decreased as appropriate to cover the cost estimate established for decommissioning in subsection (E)(1). The licensee may reduce the amount of the financial assurance following approval of the decommissioning plan, provided the radiological hazard is decreasing and the licensee has the approval of the Department.
 3. The Department shall extend the time periods established in subsection (E)(1) if a new time period is in the best interest of public health and safety.
 - a. The licensee shall submit a request for an extension no later than 30 days after the Department receives the notice required in subsection (E)(1).
 - b. If a licensee has requested an extension, the licensee is not required to commence decommissioning activities required in subsection (E)(1), until the Department has made a determination on the request submitted to the Department under subsection (E)(3)(a).
 4. Except as provided in subsection (E)(5), the licensee shall complete decommissioning of a facility as soon as practicable but no later than 24 months following the initiation of decommissioning; and except as provided in subsection (E)(5), when decommissioning involves the entire facility, the licensee shall request license termination as soon as practicable but no later than 24 months following initiation of decommissioning.
 5. The Department shall approve a request for an alternate schedule for completion of decommissioning and license termination if the Department determines that the alternative is warranted by consideration of the conditions specified in 10 CFR 30.36(i), 40.42(i), and 70.38(i), revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
 6. As a final step in decommissioning, the licensee shall meet the requirements specified in 10 CFR 30.36(j), 40.42(j), and 70.38(j), revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
- F.** Each person licensed under this Article shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for

unrestricted use. Before licensed activities are transferred or assigned in accordance with R9-7-318, licensees shall transfer all records described in ~~this paragraph~~ subsections (F)(1) through (F)(4) to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Department considers important to decommissioning consists of:

1. Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.
2. As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.
3. Except for areas containing depleted uranium used only for shielding or as penetrators in unused munitions, a list contained in a single document and updated every 2 years, of the following:
 - a. All areas designated and formerly designated as restricted areas as defined under R9-7-102;
 - b. All areas outside of restricted areas that require documentation under ~~R9-7-323(F)(1)~~ subsection (F)(1);
 - c. All areas outside of restricted areas where current and previous wastes have been buried as documented under R9-7-441; and
 - d. All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in R9-7-451 or

R9-7-452; or apply for approval for disposal under R9-7-435.

4. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.
- G.** In providing financial assurance under this section, each licensee shall use the financial assurance funds only for decommissioning activities and each licensee shall monitor the balance of funds held to account for market variations. The licensee shall replenish the funds, and report such actions to the Department, as follows:
1. If, at the end of a calendar quarter, the fund balance is below the amount necessary to cover the cost of decommissioning, but is not below 75 percent of the cost, the licensee shall increase the balance to cover the cost, and shall do so within 30 days after the end of the calendar quarter.
 2. If, at any time, the fund balance falls below 75 percent of the amount necessary to cover the cost of decommissioning, the licensee shall increase the balance to cover the cost, and shall do so within 30 days of the occurrence.
 3. Within 30 days of taking the actions required by subsection (G)(1) or (G)(2), the licensee shall provide a written report of such actions to the Director of the Department, and state the new balance of the fund.
- H.** The financial instrument must include the licensee's name, license number, and docket number, and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments to the Department reflecting such changes. The financial instrument submitted must be a signed original or signed original duplicate, except where a copy of the signed original is specifically permitted. Financial assurance for decommissioning must be provided by one or more of the following methods:
1. Prepayment. Prepayment is the deposit before the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment must be made into a trust account, and the trustee and the trust must be acceptable to the Department.
 2. A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. A parent company guarantee of funds for

decommissioning costs based on a financial test may be used if the guarantee and test are approved by the Department. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are approved by the Department. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are approved by the Department. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are approved by the Department. Except for an external sinking fund, a parent company guarantee or a guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section. A guarantee by the applicant or licensee may not be used in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

- a. The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Department, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face-value amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Department within 30 days after receipt of notification of cancellation.
- b. The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Department. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.
- c. The surety method or insurance must remain in effect until the Department

has terminated the license.

3. An external sinking fund in which deposits are made at least annually, coupled with a surety method, insurance, or other guarantee method, the value of which may reduce by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund must be in the form of a trust. If the other guarantee method is used, no surety or insurance may be combined with the external sinking fund. The surety, insurance, or other guarantee provisions must be as stated in subsection (H)(2).
4. In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning, and indicating that funds for decommissioning will be obtained when necessary.
5. When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

ARTICLE 4. STANDARDS FOR PROTECTION AGAINST IONIZING RADIATION

R9-7-408. Occupational Dose Limits for Adults

- A.** Each licensee or registrant shall control the occupational dose to individual adults, except for planned special exposures required in R9-7-413, to the following dose limits:
1. An annual limit, which is the more limiting of:
 - a. The total effective dose equivalent being equal to 0.05 Sv (5 rem): or
 - b. The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 0.5 Sv (50 rem).
 2. The annual limits to the lens of the eye, to the skin, and to the extremities which are:
 - a. A lens dose equivalent of 0.15 Sv (15 rem), and
 - b. A shallow dose equivalent of 0.5 Sv (50 rem) to the skin of the whole body or to the skin of any extremity.
- B.** Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, shall be subtracted from the limits for planned special exposures that the individual may receive during the current year and during the individual's lifetime. See R9-7-413.
- C.** The assigned deep-dose equivalent and shallow-dose equivalent are, for the portion of the body receiving the highest exposure, determined as follows:
1. The deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.
 2. If a protective apron is worn and monitoring is conducted as specified in R9-7-419(B), the effective dose equivalent for external radiation shall be determined as follows:
 - a. If only one individual monitoring device is used and it is located at the neck outside the protective apron, and the reported dose exceeds 25% of

the limit specified in ~~R9-7-408(A)~~ subsection (A), the reported deep-dose equivalent value multiplied by 0.3 is the effective dose equivalent for external radiation; or

- b. When individual monitoring devices are worn, both under the protective apron at the waist and outside the protective apron at the neck, the effective dose equivalent for external radiation is assigned the value of the sum of the deep-dose equivalent reported for the individual monitoring device located at the waist under the protective apron multiplied by 1.5 and the deep-dose equivalent reported for the individual monitoring device located at the neck outside the protective apron multiplied by 0.04.
3. When the external exposure is determined by measurement with an external personal monitoring device, the deep-dose equivalent must be used in place of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the Department. The assigned deep-dose equivalent shall be determined for the part of the body that receives the highest exposure. The assigned shallow-dose equivalent is the dose averaged over the contiguous 10 square centimeters of skin that receives the highest exposure. The deep-dose equivalent, lens-dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.
- D.** Derived air concentration (DAC) and annual limit on intake (ALI) values are presented in Table I of Appendix B and may be used to determine the individual's dose and to demonstrate compliance with the occupational dose limits.
 - E.** Notwithstanding the annual dose limits, the licensee shall limit the soluble Uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity. See footnote 3 of Appendix B.
 - F.** The licensee or registrant shall reduce the dose that an individual may receive in the current year by the amount of occupational dose received while employed occupationally as a radiation worker by all previous employers. See R9-7-412.

R9-7-415. Dose Equivalent to an Embryo or Fetus

- A. A licensee or registrant shall ensure that the dose equivalent to an embryo or fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 5 mSv (0.5 rem). Records shall be maintained according to ~~R9-7-419(D)(4) and (5)~~ R9-7-419(E)(4) and (5).
- B. The licensee or registrant shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman to satisfy the limit in subsection (A).
- C. For purposes of this Section, the dose equivalent to the embryo or fetus is the sum of:
 1. The deep-dose equivalent to the declared pregnant woman; and
 2. The dose equivalent to the embryo or fetus resulting from radionuclides in the embryo or fetus and radionuclides in the declared pregnant woman.
- D. If the dose equivalent to the embryo or fetus is found to have exceeded 5 mSv (0.5 rem) or is within 0.5 mSv (0.05 rem) of this dose by the time the woman declares the pregnancy to the licensee or registrant, the licensee or registrant shall be deemed to be in compliance with subsection (A) if the additional dose equivalent to the embryo or fetus does not exceed 0.5 mSv (0.05 rem) during the remainder of the pregnancy.

R9-7-417. Testing for Leakage or Contamination of Sealed Sources

- A. A licensee in possession of any sealed source shall ensure that:
 1. Each sealed source, except as specified in subsection (B), is tested for leakage or contamination and the test results are received before the sealed source is put into use unless the licensee has a certificate from the transferor indicating that the sealed source was tested within six months before transfer to the licensee or registrant.
 2. Each sealed source that is not designed to emit alpha particles is tested for leakage or contamination at intervals not to exceed six months or at alternative intervals approved by the Department, after evaluation of information specified by ~~R9-7-311(D)(2) and (D)(3)~~, R9-7-311(D)(2) or equivalent information specified by an Agreement State, a Licensing State, or the U.S. Nuclear Regulatory Commission.
 3. Each sealed source that is designed to emit alpha particles is tested for leakage or contamination at intervals not to exceed three months or at alternative intervals approved by the Department, after evaluation of information specified by ~~R9-7-311(D)(2) and (D)(3)~~, R9-7-311(D)(2) or equivalent information specified

by an Agreement State, a Licensing State, or the Nuclear Regulatory Commission.

4. Each sealed source suspected of damage or leakage is tested for leakage or contamination before further use.
 5. Tests for leakage for all sealed sources, except brachytherapy sources manufactured to contain radium, are capable of detecting the presence of 185 Bq (0.005 μ Ci) of radioactive material on a test sample. The person conducting the test shall take test samples from the sealed source or from the surfaces of the container in which the sealed source is stored or mounted on which contamination could accumulate. For a sealed source contained in a device, the person conducting the test shall obtain test samples when the source is in the "off" position.
 6. The test for leakage from brachytherapy sources containing radium is capable of detecting an absolute leakage rate of 37 Bq (0.001 μ Ci) of Radon-222 in a 24-hour period when the collection efficiency for Radon-222 and its daughters has been determined with respect to collection method, volume, and time.
 7. Tests for contamination from radium daughters are taken on the interior surface of brachytherapy source storage containers and are capable of detecting the presence of 185 Bq (0.005 μ Ci) of a radium daughter which has a half-life greater than four days.
- B.** A licensee need not perform tests for leakage or contamination on the following sealed sources:
1. Sealed sources containing only radioactive material with a half-life of less than 30 days;
 2. Sealed sources containing only radioactive material as a gas;
 3. Sealed sources containing 3.7 MBq (100 μ Ci) or less of beta or photon-emitting material or 370 kBq (10 μ Ci) or less of alpha-emitting material;
 4. Sealed sources containing only Hydrogen-3;
 5. Seeds of Iridium-192 encased in nylon ribbon; and
 6. Sealed sources, except teletherapy and ~~brachytherapy~~ brachytherapy sources, which are stored, not being used, and identified as in storage. The licensee shall test each sealed source for leakage or contamination and receive the test results before any use or transfer unless it has been tested for leakage or contamination

within six months before the date of use or transfer.

- C. Persons specifically authorized by the Department, an Agreement State, a Licensing State, or the U.S. Nuclear Regulatory Commission shall perform tests for leakage or contamination from sealed sources.
- D. A licensee shall maintain for Department inspection test results in units of becquerel or microcurie.
- E. The following is considered evidence that a sealed source is leaking:
 - 1. The presence of 185 Bq (0.005 μ Ci) or more of removable contamination on any test sample.
 - 2. Leakage of 37 Bq (0.001 μ Ci) of Radon-222 per 24 hours for brachytherapy sources manufactured to contain radium.
 - 3. The presence of removable contamination resulting from the decay of 185 Bq (0.005 μ Ci) or more of radium.
- F. A licensee shall immediately withdraw a leaking sealed source from use and shall take action to prevent the spread of contamination. The leaking sealed source shall be repaired or disposed of in accordance with this Article.
- G. A licensee shall file a report with the Department within five days if the test for leakage or contamination indicates a sealed source is leaking or contaminated. The report shall include the equipment involved, the test results, and the corrective action taken.
- H. A licensee shall maintain records of the tests for leakage required in subsection (A) for three years after the records are made.

R9-7-418. Surveys and Monitoring

- A. Each licensee or registrant shall make, or cause to be made, surveys if surveys are:
 - 1. Necessary for the licensee or registrant to comply with Article 4, and
 - 2. Reasonable under the circumstances to evaluate:
 - a. The magnitude and extent of radiation levels, and
 - b. Concentrations or quantities of residual radioactivity, and
 - c. The potential radiological hazards of the radiation levels and residual radioactivity detected.
- B. All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremity, that require processing to determine the radiation dose and that are used by licensees and registrants to comply with R9-7-408, with other applicable provisions of these rules, or with conditions

specified in a license or registration shall be processed and evaluated by a dosimetry processor:

1. Holding current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology, according to NVLAP procedures published March 1994 as NIST Handbook 150, and NIST Handbook 150-4, published August 1994, which is incorporated by reference, published by the U.S. Government Printing Office, Washington D.C. 20402-9325, and on file with the Department. The material incorporated by reference contains no future editions or amendments; ~~and~~
2. Approved in this accreditation process for the type of radiation or radiations included in the NVLAP program that most closely approximates the type of radiation or radiations for which the individual wearing the dosimeter is monitored; and
3. Film badges must be replaced at periods not to exceed one month; other personnel dosimeters processed and evaluated by an accredited NVLAP processor must be replaced at periods not to exceed three months.

C. The licensee or registrant shall ensure that adequate precautions are taken to prevent a deceptive exposure of an individual monitoring device and that personnel monitoring devices are issued to, and used by only the individual to whom the monitoring device has been first issued during any reporting period.

D. A licensee shall ensure that survey instruments and personnel dosimeters that are used to make quantitative measurements are calibrated in accordance with R9-7-449.

E. Records.

1. Each licensee or registrant shall maintain records showing the results of surveys required by this Section and R9-7-433(B). The licensee or registrant shall retain these records for three years after the record is made.
2. The licensee or registrant shall retain each of the following records for three years after the Department terminates the license or registration:
 - a. Records of the survey results used to determine the dose from external sources of radiation, in the absence of or in combination with individual monitoring data, and provide an assessment of individual dose equivalents;
 - b. Records of the results of measurements and calculations used to determine

- individual intakes of radioactive material and to assess an internal dose;
- c. Records showing the results of air sampling, surveys, and bioassays required according to R9-7-425(A)(3)(a) and (b); ~~and~~
 - d. Records of the measurement and calculation results used to evaluate the release of radioactive effluents to the environment; and
 - e. Notwithstanding subsection (A) of this part, records from surveys describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning, and such records must be retained in accordance with R9-7-323, as applicable.

R9-7-419. Conditions Requiring Individual Monitoring of External and Internal Occupational Dose

- A. Each licensee or registrant shall monitor exposures from sources of radiation at levels sufficient to demonstrate compliance with the occupational dose limits of this Article.
- B. At minimum each licensee or registrant shall supply and require the use of individual monitoring devices by the following personnel:
 - 1. Adults likely to receive, in one year, an intake in excess of 10% of the applicable ALI in Table I, Columns 1 and 2, of Appendix B;
 - 2. Minors and declared pregnant women likely to receive, in one year, a committed effective dose equivalent in excess of 0.5 mSv (0.05 rem);
 - 3. Adults likely to receive, in one year from radiation sources external to the body, a dose in excess of 10 percent of the limits in R9-7-408(A);
 - 4. Minors likely to receive, in one year, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem), a lens dose equivalent in excess of 1.5 mSv (0.15 rem), or a shallow dose equivalent to the skin or to the extremities in excess of 5 mSv (0.5 rem);
 - 5. Declared pregnant women likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem) (Note: All of the occupational doses in R9-7-408 continue to be applicable to the declared pregnant worker as long as the embryo/fetus dose limit is not exceeded.); ~~and~~
 - 6. Individuals entering a high or very high radiation area;
 - 7. Individuals operating mobile x-ray equipment, ~~except dental intraoral systems, as~~

described in R9-7-608;

8. Individuals holding animals for diagnostic x-ray procedures, as described in R9-7-613;
 9. Individuals servicing enclosed beam x-ray systems with bypassed interlocks, as described in R9-7-803;
 10. Individuals operating open beam fluoroscopic systems and ancillary personnel working in the room when the fluoroscopic system is in use, except when relieved of this requirement by registration condition;
 11. Individuals performing well logging, as described in Article 17; ~~and~~
 12. Individuals, wearing a finger or wrist individual monitoring device, during the operation of an open-beam or hand held analytical x-ray system or equipment with no safety devices as described in R9-7-806(C) and (F); ~~and~~
 13. Individuals, wearing a finger or wrist individual monitoring device, performing repairs that require the presence of a primary beam of the analytical x-ray system or equipment, as described in R9-7-806(C) and (F).
- C.** Each licensee shall monitor the occupational intake of radioactive material by and assess the committed effective dose equivalent to:
1. Adults likely to receive, in one year, an intake in excess of 10 percent of the applicable ALI in Table 1, Columns 1 and 2, of Appendix B;
 2. Minors likely to receive, in one year, a committed effective dose equivalent in excess of 1 mSv (0.1 rem); and
 3. Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 1 mSv (0.1 rem).
- D.** Each licensee or registrant shall require that all individual monitoring devices be located on individuals according to the following requirements:
1. An individual monitoring device, used to obtain the dose equivalent to an embryo or fetus of a declared pregnant woman according to R9-7-415, shall be located under the protective apron at the waist. A qualified expert shall be consulted to determine the dose equivalent to the embryo or fetus if this individual monitoring device has a monthly reported dose equivalent value that exceeds 0.5 millisieverts (50 millirem). For purposes of this subsection, the value for determining the dose equivalent to an embryo or fetus under R9-7-415(C), for occupational exposure to radiation from medical fluoroscopic equipment, is the

value reported by the individual monitoring device worn at the waist underneath the protective apron, which has been corrected for the particular individual and the work environment by a qualified expert.

2. An individual monitoring device used for lens dose equivalent shall be located at the neck or an unshielded location closer to the eye, outside the protective apron.
3. If only one individual monitoring device is used to determine the effective dose equivalent for external radiation, according to R9-7-408(C)(2)(a), the device shall be located at the neck outside the protective apron. If a second individual monitoring device is used for the same purpose, it shall be located under the protective apron at the waist. A second individual monitoring device is required for a declared pregnant woman.
4. An individual, wearing an extremity personnel monitoring device, during the operation of an open-beam or hand-held analytical x-ray system with no safety devices or an individual performing repairs in the presence of a primary beam of the analytical x-ray system or equipment, as described in R9-7-806(C) and (F), shall wear the device on the individual's finger or wrist.

E. Records.

1. Each licensee or registrant shall maintain records of doses received by all individuals for whom monitoring is required according to this Section, and records of doses received during planned special exposures, accidents, and emergency conditions. Assessments of dose equivalent and records made using units in effect before January 1, 1994, need not be changed. These records shall include, when applicable:
 - a. The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin, and shallow-dose equivalent to the extremities;
 - b. The estimated intake of radionuclides;
 - c. The committed effective dose equivalent assigned to the intake of radionuclides;
 - d. The specific information used to assess the committed effective dose equivalent according to R9-7-411(A) and (C), and when required R9-7-419;
 - e. The total effective dose equivalent when required by R9-7-409; and

- f. The total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose;
2. The licensee or registrant shall make entries of the records specified in subsection (D)(1), at intervals not to exceed one year;
3. The licensee or registrant shall maintain at the inspection site the records specified in subsection (D)(1), ~~on Department Form Z (available from the Department), in accordance with the instructions for Department Form Z, or~~ in a clear and legible method ~~which~~ that contains all the information required by this subsection;
4. The licensee or registrant shall maintain the records of dose to an embryo or fetus with the records of dose to the declared pregnant woman. The declaration of pregnancy, including the estimated date of conception, shall also be kept on file but may be maintained separately from the dose records; and
5. The licensee or registrant shall retain each required form or record for three years after the Department terminates each pertinent license or registration requiring the record.

R9-7-448. Additional Reporting

- A. Each licensee shall notify the Department as soon as possible, but not later than four hours after the discovery of an event, and take immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed the limits specified in this Chapter or releases of licensed material that could exceed the limits specified in this Chapter. For purposes of this Section, event means a radiation accident involving a fire, explosion, gas release, or similar occurrence.
- B. Each licensee shall notify the Department within 24 hours after discovering any of the following events involving licensed material:
 1. A contamination event that:
 - a. Requires that anyone having access to the contaminated area be restricted for more than 24 hours by the imposition of additional radiological controls to prohibit entry into the area; and
 - b. Involves a quantity of radioactive material greater than five times the lowest annual limit on intake specified in Appendix B of this Article; and
 - c. Results in access to the contaminated area being restricted for a reason other than to allow radionuclides with a half-life of less than 24 hours to decay prior to decontamination.

2. An event in which equipment is disabled or fails to function as designed when:
 - a. The equipment is part of a system designed to prevent releases exceeding the limits specified in this Chapter, to prevent exposures to radiation and radioactive materials exceeding limits specified in this Chapter, or to mitigate the consequences of an accident; and
 - b. The equipment performs a safety function; and
 - c. No redundant equipment is available and operable to perform the required safety function.
 3. An event that requires urgent medical treatment of an individual with radioactive contamination on the individual's clothing or body.
 4. A fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:
 - a. The quantity of material involved is greater than five times the lowest annual limit on intake specified in Appendix B of this Article, and
 - b. The damage affects the integrity of the licensed material or its container.
- C. Each licensee shall make reports required by subsections (A) and (B) above by telephone to the Department. To the extent that the information is available at the time of notification, the information provided in these reports shall include:
1. The callers's name, official title, and call back telephone number;
 2. A description of the event, including date and time;
 3. The exact location of the event;
 4. The isotopes, quantities, and chemical and physical form of the licensed material involved; and
 5. Any personnel radiation exposure data available.
- D. Each licensee who makes a report required by subsection (A) or (B) shall submit to the Department a written follow-up report within 30 days of the initial report. Written reports prepared as required by other rules may be submitted to fulfill this requirement if the reports contain all of the required information in this subsection. The report shall include the following:
1. A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;
 2. The exact location of the event;
 3. The isotopes, quantities, and chemical and physical form of the licensed material

involved;

4. Date and time of the event;
5. Corrective actions taken or planned and the results of any evaluations or assessments;
and
6. The extent of personnel exposure to radiation or to radioactive materials without identification of each exposed individual by name.

E. Each licensee that makes a report required by subsection (A) or (B) shall submit a written follow-up report to the Department within 60 days after the initial report.

R9-7-451. Termination of a Radioactive Material License or a Licensed Activity

- A.** As the final step before terminating a radioactive material use program licensed under R9-7-312, the licensee shall:
1. Certify to the Department the disposition of all licensed material, including accumulated wastes, by submitting a complete description of a disposal plan with signed receipts from all licensed persons receiving the licensed material; and
 2. Conduct a radiation survey of the premises where the licensed activities were carried out to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in R9-7-452 and submit to the Department a report of the results of this survey, unless the licensee demonstrates in some other manner acceptable to the Department that the premises are suitable for release in accordance with the criteria for decommissioning in R9-7-452.
- B.** Before terminating a licensed program, each licensee authorized to possess radioactive material with a half-life greater than 120 days, in any unsealed form, shall forward the following records to the Department:
1. Records of disposal of the licensed material required by R9-7-435, R9-7-436, R9-7-437, and R9-7-438; and
 2. Records required by ~~R9-7-418(D)(2)(d)~~ R9-7-418.
- C.** If a licensed activity is transferred or assigned in accordance with subsection (E), each licensee authorized to possess radioactive material with a half-life greater than 120 days, in any unsealed form, shall transfer the following records to the new licensee and the new licensee shall maintain these records until the license is terminated:
1. Records of disposal of licensed material required by R9-7-435, R9-7-436, R9-7-437, and R9-7-438; and
 2. Records required by ~~R9-7-418(D)(2)(d)~~ R9-7-418.

- D.** Before the Department terminates a license, each licensee shall forward the records required by subsection (E) to the Department.
- E.** A person licensed under R9-7-312 shall maintain required records regarding decommissioning of a facility in a location identified on the license until the Department releases the site for unrestricted use. Before transfer or assignment of licensed activities, a licensee shall transfer all records required by this Section to the transferee. If records relating to facility decommissioning are kept for other purposes, the transferee shall refer to these records and provide their location on the transferee's application for a license. The transferee shall maintain the records until the Department terminates the transferee's new license. The new licensee shall maintain the following decommissioning records for Department review:
1. Records of spills or other occurrences involving the spread of contamination in and around the facility, equipment, or site. The licensee shall maintain a record of any instance when contamination remains after cleanup procedures or there is a reasonable likelihood that a contaminant has spread to an inaccessible area, as in the case of possible seepage into porous material such as concrete. These records shall include any known information that identifies any radionuclide involved and its quantity, form, and concentration.
 2. As-built drawings showing modifications of structures and equipment in restricted areas where radioactive materials are used or stored, and locations of possible inaccessible contamination, such as buried pipes. If as-built drawings are referenced, the licensee need not index each relevant document individually. If drawings are not available, the licensee shall provide records with known information concerning these areas and locations, as prescribed in subsection (E) (1).
 3. Except for areas that contain depleted uranium used only for shielding or as penetrators in unused munitions, a list, contained in a single document and updated every two years, of the following:
 - a. Any area designated or formerly designated as a restricted area as defined under R9-7-102;
 - b. Any area outside of a restricted area for which documentation is required under subsection (B)(1);
 - c. Any area outside of a restricted area where wastes have been buried;

- d. Any area outside of a restricted area that contains regulated radioactive material that will require the licensee to either decontaminate the area for decommissioning under R9-7-452 or obtain disposal approval under R9-7-435; and
 - e. Any restricted area where wastes have been buried.
4. Records of the cost estimate performed for the decommissioning funding plan or the amount certified by the Department for decommissioning and the method for assuring funding, if either a funding plan or certification is used.

APPENDIX C.**QUANTITIES¹ OF LICENSED OR REGISTERED MATERIAL
REQUIRING LABELING**

Radionuclide	Quantity (μCi)
Hydrogen-3	1,000
Beryllium-7	1,000
Beryllium-10	1
Carbon-11	1,000
Carbon-14	1,000
Fluorine-18	1,000
Sodium-22	10
Sodium-24	100
Magnesium-28	100
Aluminum-26	10
Silicon-31	1,000
Silicon-32	1
Phosphorus-32	10
Phosphorus-33	100
Sulfur-35	100
Chlorine-36	10
Chlorine-38	1,000
Chlorine-39	1,000
Argon-39	1,000
Argon-41	1,000
Potassium-40	100
Potassium-42	1,000
Potassium-43	1,000
Potassium-44	1,000
Potassium-45	1,000
Calcium-41	100
Calcium-45	100
Calcium-47	100
Scandium-43	1,000
Scandium-44m	100
Scandium-44	100
Scandium-46	10
Scandium-47	100
Scandium-48	100
Scandium-49	1,000
Titanium-44	1
Titanium-45	1,000
Vanadium-47	1,000
Vanadium-48	100
Vanadium-49	1,000
Chromium-48	1,000
Chromium-49	1,000
Chromium-51	1,000
Manganese-51	1,000

Manganese-52m	1,000
Manganese-52	100
Manganese-53	1,000
Manganese-54	100
Manganese-56	1,000
Iron-52	100
Iron-55	100
Iron-59	10
Iron-60	1
Cobalt-55	100
Cobalt-56	10
Cobalt-57	100
Cobalt-58m	1,000
Cobalt-58	100
Cobalt-60m	1,000
Cobalt-60	1
Cobalt-61	1,000
Cobalt-62m	1,000
Nickel-56	100
Nickel-57	100
Nickel-59	100
Nickel-63	100
Nickel-65	1,000
Nickel-66	10
Copper-60	1,000
Copper-61	1,000
Copper-64	1,000
Copper-67	1,000
Zinc-62	100
Zinc-63	1,000
Zinc-65	10
Zinc-69m	100
Zinc-69	1,000
Zinc-71m	1,000
Zinc-72	100
Gallium-65	1,000
Gallium-66	100
Gallium-67	1,000
Gallium-68	1,000
Gallium-70	1,000
Gallium-72	100
Gallium-73	1,000
Germanium-66	1,000
Germanium-67	1,000
Germanium-68	10
Germanium-69	1,000
Germanium-71	1,000
Germanium-75	1,000
Germanium-77	1,000

Germanium-78	1,000
Arsenic-69	1,000
Arsenic-70	1,000
Arsenic-71	100
Arsenic-72	100
Arsenic-73	100
Arsenic-74	100
Arsenic-76	100
Arsenic-77	100
Arsenic-78	1,000
Selenium-70	1,000
Selenium-73m	1,000
Selenium-73	100
Selenium-75	100
Selenium-79	100
Selenium-81m	1,000
Selenium-81	1,000
Selenium-83	1,000
Bromine-74m	1,000
Bromine-74	1,000
Bromine-75	1,000
Bromine-76	100
Bromine-77	1,000
Bromine-80m	1,000
Bromine-80	1,000
Bromine-82	100
Bromine-83	1,000
Bromine-84	1,000
Krypton-74	1,000
Krypton-76	1,000
Krypton-77	1,000
Krypton-79	1,000
Krypton-81	1,000
Krypton-83m	1,000
Krypton-85m	1,000
Krypton-85	1,000
Krypton-87	1,000
Krypton-88	1,000
Rubidium-79	1,000
Rubidium-81m	1,000
Rubidium-81	1,000
Rubidium-82m	1,000
Rubidium-83	100
Rubidium-84	100
Rubidium-86	100
Rubidium-87	100
Rubidium-88	1,000
Rubidium-89	1,000
Strontium-80	100

Strontium-81	1,000
Strontium-83	100
Strontium-85m	1,000
Strontium-85	100
Strontium-87m	1,000
Strontium-89	10
Strontium-90	0.1
Strontium-91	100
Strontium-92	100
Yttrium-86m	1,000
Yttrium-86	100
Yttrium-87	100
Yttrium-88	10
Yttrium-90m	1,000
Yttrium-90	10
Yttrium-91m	1,000
Yttrium-91	10
Yttrium-92	100
Yttrium-93	100
Yttrium-94	1,000
Yttrium-95	1,000
Zirconium-86	100
Zirconium-88	10
Zirconium-89	100
Zirconium-93	1
Zirconium-95	10
Zirconium-97	100
Niobium-88	1,000
Niobium-89m (66 min)	1,000
Niobium-89 (122 min)	1,000
Niobium-90	100
Niobium-93m	10
Niobium-94	1
Niobium-95m	100
Niobium-95	100
Niobium-96	100
Niobium-97	1,000
Niobium-98	1,000
Molybdenum-90	100
Molybdenum-93m	100
Molybdenum-93	10
Molybdenum-99	100
Molybdenum-101	1,000
Technetium-93m	1,000
Technetium-93	1,000
Technetium-94m	1,000
Technetium-94	1,000

Technetium-96m	1,000
Technetium-96	100
Technetium-97m	100
Technetium-97	1,000
Technetium-98	10
Technetium-99m	1,000
Technetium-99	100
Technetium-101	1,000
Technetium-104	1,000
Ruthenium-94	1,000
Ruthenium-97	1,000
Ruthenium-103	100
Ruthenium-105	1,000
Ruthenium-106	1
Rhodium-99m	1,000
Rhodium-99	100
Rhodium-100	100
Rhodium-101m	1,000
Rhodium-101	10
Rhodium-102m	10
Rhodium-102	10
Rhodium-103m	1,000
Rhodium-105	100
Rhodium-106m	1,000
Rhodium-107	1,000
Palladium-100	100
Palladium-101	1,000
Palladium-103	100
Palladium-107	10
Palladium-109	100
Silver-102	1,000
Silver-103	1,000
Silver-104m	1,000
Silver-104	1,000
Silver-105	100
Silver-106m	100
Silver-106	1,000
Silver-108m	1
Silver-110m	10
Silver-111	100
Silver-112	100
Silver-115	1,000
Cadmium-104	1,000
Cadmium-107	1,000
Cadmium-109	1
Cadmium-113m	0.1
Cadmium-113	100
Cadmium-115m	10
Cadmium-115	100

Cadmium-117m	1,000
Cadmium-117	1,000
Indium-109	1,000
Indium-110m	
(69.1m)	1,000
Indium-110	
(4.9h)	1,000
Indium-111	100
Indium-112	1,000
Indium-113m	1,000
Indium-114m	10
Indium-115m	1,000
Indium-115	100
Indium-116m	1,000
Indium-117m	1,000
Indium-117	1,000
Indium-119m	1,000
Tin-110	100
Tin-111	1,000
Tin-113	100
Tin-117m	100
Tin-119m	100
Tin-121m	100
Tin-121	1,000
Tin-123m	1,000
Tin-123	10
Tin-125	10
Tin-126	10
Tin-127	1,000
Tin-128	1,000
Antimony-115	1,000
Antimony-116m	1,000
Antimony-116	1,000
Antimony-117	1,000
Antimony-118m	1,000
Antimony-119	1,000
Antimony-120	
(16m)	1,000
Antimony-120	
(5.76d)	100
Antimony-122	100
Antimony-124m	1,000
Antimony-124	10
Antimony-125	100
Antimony-126m	1,000
Antimony-126	100
Antimony-127	100
Antimony-128	
(10.4m)	1,000

Antimony-128 (9.01h)	100
Antimony-129	100
Antimony-130	1,000
Antimony-131	1,000
Tellurium-116	1,000
Tellurium-121m	10
Tellurium-121	100
Tellurium-123m	10
Tellurium-123	100
Tellurium-125m	10
Tellurium-127m	10
Tellurium-127	1,000
Tellurium-129m	10
Tellurium-129	1,000
Tellurium-131m	10
Tellurium-131	100
Tellurium-132	10
Tellurium-133m	100
Tellurium-133	1,000
Tellurium-134	1,000
Iodine-120m	1,000
Iodine-120	100
Iodine-121	1,000
Iodine-123	100
Iodine-124	10
Iodine-125	1
Iodine-126	1
Iodine-128	1,000
Iodine-129	1
Iodine-130	10
Iodine-131	1
Iodine-132m	100
Iodine-132	100
Iodine-133	10
Iodine-134	1,000
Iodine-135	100
Xenon-120	1,000
Xenon-121	1,000
Xenon-122	1,000
Xenon-123	1,000
Xenon-125	1,000
Xenon-127	1,000
Xenon-129m	1,000
Xenon-131m	1,000
Xenon-133m	1,000
Xenon-133	1,000
Xenon-135m	1,000
Xenon-135	1,000

Xenon-138	1,000
Cesium-125	1,000
Cesium-127	1,000
Cesium-129	1,000
Cesium-130	1,000
Cesium-131	1,000
Cesium-132	100
Cesium-134m	1,000
Cesium-134	10
Cesium-135m	1,000
Cesium-135	100
Cesium-136	1
Cesium-137	10
Cesium-138	1,000
Barium-126	1,000
Barium-128	100
Barium-131m	1,000
Barium-131	100
Barium-133m	100
Barium-133	100
Barium-135m	100
Barium-139	1,000
Barium-140	100
Barium-141	1,000
Barium-142	1,000
Lanthanum-131	1,000
Lanthanum-132	100
Lanthanum-135	1,000
Lanthanum-137	10
Lanthanum-138	100
Lanthanum-140	100
Lanthanum-141	100
Lanthanum-142	1,000
Lanthanum-143	1,000
Cerium-134	100
Cerium-135	100
Cerium-137m	100
Cerium-137	1,000
Cerium-139	100
Cerium-141	100
Cerium-143	100
Cerium-144	1
Praseodymium-136	1,000
Praseodymium-137	1,000
Praseodymium-138m	1,000
Praseodymium-139	1,000
Praseodymium-142m	1,000
Praseodymium-142	100
Praseodymium-143	100

Praseodymium-144	1,000
Praseodymium-145	100
Praseodymium-147	1,000
Neodymium-136	1,000
Neodymium-138	100
Neodymium-139m	1,000
Neodymium-139	1,000
Neodymium-141	1,000
Neodymium-147	100
Neodymium-149	1,000
Neodymium-151	1,000
Promethium-141	1,000
Promethium-143	100
Promethium-144	10
Promethium-145	10
Promethium-146	1
Promethium-147	10
Promethium-148m	10
Promethium-148	10
Promethium-149	100
Promethium-150	1,000
Promethium-151	100
Samarium-141m	1,000
Samarium-141	1,000
Samarium-142	1,000
Samarium-145	100
Samarium-146	1
Samarium-147	100
Samarium-151	10
Samarium-153	100
Samarium-155	1,000
Samarium-156	1,000
Europium-145	100
Europium-146	100
Europium-147	100
Europium-148	10
Europium-149	100
Europium-150 (12.62h)	100
Europium-150 (34.2y)	1
Europium-152m	100
Europium-152	1
Europium-154	1
Europium-155	10
Europium-156	100
Europium-157	100
Europium-158	1,000
Gadolinium-145	1,000

Gadolinium-146	10
Gadolinium-147	100
Gadolinium-148	0.001
Gadolinium-149	100
Gadolinium-151	10
Gadolinium-152	100
Gadolinium-153	10
Gadolinium-159	100
Terbium-147	1,000
Terbium-149	100
Terbium-150	1,000
Terbium-151	100
Terbium-153	1,000
Terbium-154	100
Terbium-155	1,000
Terbium-156m (5.0h)	1,000
Terbium-156m (24.4h)	1,000
Terbium-156	100
Terbium-157	10
Terbium-158	1
Terbium-160	10
Terbium-161	100
Dysprosium-155	1,000
Dysprosium-157	1,000
Dysprosium-159	100
Dysprosium-165	1,000
Dysprosium-166	100
Holmium-155	1,000
Holmium-157	1,000
Holmium-159	1,000
Holmium-161	1,000
Holmium-162m	1,000
Holmium-162	1,000
Holmium-164m	1,000
Holmium-164	1,000
Holmium-166m	1
Holmium-166	100
Holmium-167	1,000
Erbium-161	1,000
Erbium-165	1,000
Erbium-169	100
Erbium-171	100
Erbium-172	100
Thulium-162	1,000
Thulium-166	100
Thulium-167	100
Thulium-170	10

Thulium-171	10
Thulium-172	100
Thulium-173	100
Thulium-175	1,000
Ytterbium-162	1,000
Ytterbium-166	100
Ytterbium-167	1,000
Ytterbium-169	100
Ytterbium-175	100
Ytterbium-177	1,000
Ytterbium-178	1,000
Lutetium-169	100
Lutetium-170	100
Lutetium-171	100
Lutetium-172	100
Lutetium-173	10
Lutetium-174m	10
Lutetium-174	10
Lutetium-176m	1,000
Lutetium-176	100
Lutetium-177m	10
Lutetium-177	100
Lutetium-178m	1,000
Lutetium-178	1,000
Lutetium-179	1,000
Hafnium-170	100
Hafnium-172	1
Hafnium-173	1,000
Hafnium-175	100
Hafnium-177m	1,000
Hafnium-178m	0.1
Hafnium-179m	10
Hafnium-180m	1,000
Hafnium-181	10
Hafnium-182m	1,000
Hafnium-182	0.1
Hafnium-183	1,000
Hafnium-184	100
Tantalum-172	1,000
Tantalum-173	1,000
Tantalum-174	1,000
Tantalum-175	1,000
Tantalum-176	100
Tantalum-177	1,000
Tantalum-178	1,000
Tantalum-179	100
Tantalum-180m	1,000
Tantalum-180	100
Tantalum-182m	1,000

Tantalum-182	10
Tantalum-183	100
Tantalum-184	100
Tantalum-185	1,000
Tantalum-186	1,000
Tungsten-176	1,000
Tungsten-177	1,000
Tungsten-178	1,000
Tungsten-179	1,000
Tungsten-181	1,000
Tungsten-185	100
Tungsten-187	100
Tungsten-188	10
Rhenium-177	1,000
Rhenium-178	1,000
Rhenium-181	1,000
Rhenium-182 (12.7h)	1,000
Rhenium-182 (64.0h)	100
Rhenium-184m	10
Rhenium-184	100
Rhenium-186m	10
Rhenium-186	100
Rhenium-187	1,000
Rhenium-188m	1,000
Rhenium-188	100
Rhenium-189	100
Osmium-180	1,000
Osmium-181	1,000
Osmium-182	100
Osmium-185	100
Osmium-189m	1,000
Osmium-191m	1,000
Osmium-191	100
Osmium-193	100
Osmium-194	1
Iridium-182	1,000
Iridium-184	1,000
Iridium-185	1,000
Iridium-186	100
Iridium-187	1,000
Iridium-188	100
Iridium-189	100
Iridium-190m	1,000
Iridium-190	100
Iridium-192m (1.4m)	10
Iridium-192	

(73.8d)	1
Iridium-194m	10
Iridium-194	100
Iridium-195m	1,000
Iridium-195	1,000
Platinum-186	1,000
Platinum-188	100
Platinum-189	1,000
Platinum-191	100
Platinum-193m	100
Platinum-193	1,000
Platinum-195m	100
Platinum-197m	1,000
Platinum-197	100
Platinum-199	1,000
Platinum-200	100
Gold-193	1,000
Gold-194	100
Gold-195	10
Gold-198m	100
Gold-198	100
Gold-199	100
Gold-200m	100
Gold-200	1,000
Gold-201	1,000
Mercury-193m	100
Mercury-193	1,000
Mercury-194	1
Mercury-195m	100
Mercury-195	1,000
Mercury-197m	100
Mercury-197	1,000
Mercury-199m	1,000
Mercury-203	100
Thallium-194m	1,000
Thallium-194	1,000
Thallium-195	1,000
Thallium-197	1,000
Thallium-198m	1,000
Thallium-198	1,000
Thallium-199	1,000
Thallium-201	1,000
Thallium-200	1,000
Thallium-202	100
Thallium-204	100
Lead-195m	1,000
Lead-198	1,000
Lead-199	1,000
Lead-200	100

Lead-201	1,000
Lead-202m	1,000
Lead-202	10
Lead-203	1,000
Lead-205	100
Lead-209	1,000
Lead-210	0.01
Lead-211	100
Lead-212	1
Lead-214	100
Bismuth-200	1,000
Bismuth-201	1,000
Bismuth-202	1,000
Bismuth-203	100
Bismuth-205	100
Bismuth-206	100
Bismuth-207	10
Bismuth-210m	0.1
Bismuth-210	1
Bismuth-212	10
Bismuth-213	10
Bismuth-214	100
Polonium-203	1,000
Polonium-205	1,000
Polonium-207	1,000
Polonium-210	0.1
Astatine-207	100
Astatine-211	10
Radon-220	1
Radon-222	1
Francium-222	100
Francium-223	100
Radium-223	0.1
Radium-224	0.1
Radium-225	0.1
Radium-226	0.1
Radium-227	1,000
Radium-228	0.1
Actinium-224	1
Actinium-225	0.01
Actinium-226	0.1
Actinium-227	0.001
Actinium-228	1
Thorium-226	10
Thorium-227	0.01
Thorium-228	0.001
Thorium-229	0.001
Thorium-230	0.001
Thorium-231	100

Thorium-232	100
Thorium-234	10
Thorium-natural	100
Protactinium-227	10
Protactinium-228	1
Protactinium-230	0.1
Protactinium-231	0.001
Protactinium-232	1
Protactinium-233	100
Protactinium-234	100
Uranium-230	0.01
Uranium-231	100
Uranium-232	0.001
Uranium-233	0.001
Uranium-234	0.001
Uranium-235	0.001
Uranium-236	0.001
Uranium-237	100
Uranium-238	100
Uranium-239	1,000
Uranium-240	100
Uranium-natural	100
Neptunium-232	100
Neptunium-233	1,000
Neptunium-234	100
Neptunium-235	100
Neptunium-236 (1.15E + 5)	0.001
Neptunium-236 (22.5h)	1
Neptunium-237	0.001
Neptunium-238	10
Neptunium-239	100
Neptunium-240	1,000
Plutonium-234	10
Plutonium-235	1,000
Plutonium-236	0.001
Plutonium-237	100
Plutonium-238	0.001
Plutonium-239	0.001
Plutonium-240	0.001
Plutonium-241	0.01
Plutonium-242	0.001
Plutonium-243	1,000
Plutonium-244	0.001
Plutonium-245	100
Americium-237	1,000
Americium-238	100
Americium-239	1,000

Americium-240	100
Americium-241	0.001
Americium-242m	0.001
Americium-242	10
Americium-243	0.001
Americium-244m	100
Americium-244	10
Americium-245	1,000
Americium-246m	1,000
Americium-246	1,000
Curium-238	100
Curium-240	0.1
Curium-241	1
Curium-242	0.01
Curium-243	0.001
Curium-244	0.001
Curium-245	0.001
Curium-246	0.001
Curium-247	0.001
Curium-248	0.001
Curium-249	1,000
Berkelium-245	100
Berkelium-246	100
Berkelium-247	0.001
Berkelium-249	0.1
Berkelium-250	10
Californium-244	100
Californium-246	1
Californium-248	0.01
Californium-249	0.001
Californium-250	0.001
Californium-251	0.001
Californium-252	0.001
Californium-253	0.1
Californium-254	0.001
Einsteinium-250	100
Einsteinium-251	100
Einsteinium-253	0.1
Einsteinium-254m	1
Einsteinium-254	0.01
Fermium-252	1
Fermium-253	1
Fermium-254	10
Fermium-255	1
Fermium-257	0.01
Mendelevium-257	10
Mendelevium-258	0.01
Any alpha-emitting radionuclide not	

listed above or mixtures of alpha emitters of unknown composition	0.001
Any radionuclide other than alpha-emitting radionuclides not listed above, or mixtures of beta emitters of unknown composition	0.01

* To convert μCi to kBq , multiply the μCi value by 37.

NOTE: ~~For purposes of R9-7-428(E), R9-7-432(A), and R9-7-443(A) where~~ Where there is involved a combination of radionuclides in known amounts, the limit for the combination shall be derived as follows: determine, for each radionuclide in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific radionuclide when not in combination. The sum of such ratios for all radionuclides in the combination may not exceed "1" -- that is, unity.

¹ The quantities listed above were derived by taking 1/10 of the most restrictive ALI listed in Table I, Columns 1 and 2, of Appendix B to Article 4, rounding to the nearest factor of 10, and constraining the values listed between 37 Bq and 37 MBq (0.001 and 1,000 μCi). Values of 3.7 MBq (100 μCi) have been assigned for radionuclides having a radioactive half-life in excess of $E+9$ years, except rhenium, 37 MBq (1,000 μCi), to take into account their low specific activity.

ARTICLE 6. USE OF X-RAYS IN THE HEALING ARTS

R9-7-611.01. Electronic Brachytherapy to Deliver Interstitial and ~~Intracavity~~ Intracavitary Therapeutic Radiation Dosage

- A.** Electronic brachytherapy devices used to deliver interstitial and ~~intracavity~~ intracavitary therapeutic radiation dosage shall be subject to the requirements of this Section, and unless otherwise specified in this Section shall be exempt from the requirements of R9-7-611.
1. An electronic brachytherapy device that does not meet the requirements of this Section shall not be used for irradiation of patients; and
 2. An electronic brachytherapy device shall only be utilized for human use applications specifically approved by the U.S. Food and Drug Administration (FDA), unless participating in a research study approved by the registrant's Institutional Review Board (IRB).
- B.** Each facility location authorized to use an electronic brachytherapy device in accordance with this Section shall possess appropriately calibrated portable monitoring equipment. At a minimum, such equipment shall include a portable survey instrument capable of measuring dose rates over the range 10 μ Sv (1 mrem) per hour to 10 mSv (1000 mrem) per hour. The survey instrument shall be capable of measuring as low as 10 μ Sv (1 mrem) per hour in the energy range of the electronic brachytherapy unit for which the survey instrument is to be used. Published correction factors utilized in conjunction with the instrument's readings may be used to achieve sensitivity. The survey instrument or instruments shall be operable and calibrated before first use, at intervals not to exceed 12 months, and after survey instrument repairs.
- C.** Facility Design Requirements for Electronic Brachytherapy Devices. In addition to shielding adequate to meet requirements of R9-7-603(C), the treatment room shall meet the following design requirements:
1. If applicable, provision shall be made to prevent simultaneous operation of more than one therapeutic radiation machine in a treatment room.
 2. Access to the treatment room shall be controlled by a door at each entrance.
 3. Each treatment room shall have provisions to permit continuous oral communication and visual observation of the patient from the treatment control

panel during irradiation. The electronic brachytherapy device shall not be used for patient irradiation unless the patient can be observed.

4. For electronic brachytherapy devices capable of operating below 150 kVp, radiation shielding for the staff in the treatment room may be available, either as a portable shield or as localized shielded material around the treatment site or both, in lieu of the requirements for room shielding. The shielding shall meet the requirements of R9-7-603(C).
 5. For electronic brachytherapy devices capable of operating at or greater than 150 kVp, the facility must meet the requirements of R9-7-611(B)(4).
- D.** Control Panel Functions. The control panel, in addition to the displays required by other provisions in this Section, shall:
1. Provide an indication of whether electrical power is available at the control panel and if activation of the electronic brachytherapy source is possible;
 2. Provide an indication of whether x-rays are being produced;
 3. Provide a means for indicating electronic brachytherapy source potential and current;
 4. Provide the means for terminating an exposure at any time; and
 5. Include an access control (locking) device that will prevent unauthorized use of the electronic brachytherapy device.
- E.** Timer. A suitable irradiation control device (timer) shall be provided to terminate the irradiation after a pre-set time interval or integrated charge on a dosimeter-based monitor.
1. A timer shall be provided at the treatment control panel. The timer shall indicate the planned setting and the time elapsed or remaining;
 2. The timer shall not permit an exposure if set at zero;
 3. The timer shall be a cumulative device that activates with an indication of "BEAM-ON" that retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to reset the elapsed time indicator;
 4. The timer shall terminate irradiation when a pre-selected time has elapsed, if any dose monitoring system has not previously terminated irradiation.
 5. The timer shall permit setting of exposure times as short as 0.1 second; and
 6. The timer shall be accurate to within one percent of the selected value or 0.1 second, whichever is greater.

F. Qualified Medical Physicist Support.

1. The services of a Qualified Medical Physicist shall be required in facilities having electronic brachytherapy devices. The Qualified Medical Physicist shall be responsible for:
 - a. Evaluation of the output from the electronic brachytherapy source;
 - b. Generation of the necessary dosimetric information;
 - c. Supervision and review of treatment calculations prior to initial treatment of any treatment site;
 - d. Establishing the periodic and day-of-use quality assurance checks and reviewing the data from those checks as required in subsection (J);
 - e. Consultation with the authorized user in treatment planning, as needed; and
 - f. Performing calculations/assessments regarding patient treatments that may constitute a medical event.
2. If the Qualified Medical Physicist is not a full-time employee of the registrant, then the operating procedures required by subsection (G) shall also specifically address how the Qualified Medical Physicist is to be contacted for problems or emergencies, as well as the specific actions, if any, to be taken until the Qualified Medical Physicist can be contacted.

G. Operating Procedures.

1. Only individuals approved by the authorized user, Radiation Safety Officer, or Qualified Medical Physicist shall be present in the treatment room during treatment;
2. Electronic brachytherapy devices shall not be made available for medical use unless the requirements of subsections (A), (H), and (I) have been met;
3. The electronic brachytherapy device shall be inoperable, either by hardware or password, when unattended by qualified staff or service personnel;
4. During operation, the electronic brachytherapy device operator shall monitor the position of all persons in the treatment room, and all persons entering the treatment room, to prevent entering persons from unshielded exposure from the treatment beam;
5. If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used;

6. Written procedures shall be developed, implemented, and maintained for responding to an abnormal situation. These procedures shall include:
 - a. Instructions for responding to equipment failures and the names of the individuals responsible for implementing corrective actions; and
 - b. The names and telephone numbers of the authorized users, the Qualified Medical Physicist, and the Radiation Safety Officer to be contacted if the device or console operates abnormally.
7. A copy of the current operating and emergency procedures shall be physically located at the electronic brachytherapy device control console;
8. Instructions shall be maintained with the electronic brachytherapy device control console to inform the operator of the names and telephone numbers of the authorized users, the Qualified Medical Physicist, and the Radiation Safety Officer to be contacted if the device or console operates abnormally; and
9. The Radiation Safety Officer, or the Radiation Safety Officer's designee, and an authorized user shall be notified immediately if the patient has a medical emergency, suffers injury or dies. The Radiation Safety Officer or the Qualified Medical Physicist shall inform the manufacturer of the event.

H. Safety Precautions for Electronic Brachytherapy Devices.

1. Any person in the treatment room, other than the person being treated, shall wear personnel monitoring devices;
2. An authorized user and a Qualified Medical Physicist shall be physically present during the initiation of all new patient treatments involving the electronic brachytherapy device;
3. After the first treatment one of the following individuals shall be physically present during continuation of all patient treatments involving the electronic brachytherapy device:
 - a. A Qualified Medical Physicist, or
 - b. An authorized user, or
 - c. A certified therapy technologist (CTT) certified by the Arizona Medical Radiologic Technology Board of Examiners, under the direct supervision of an authorized user, who has been trained in the operation and emergency response for the electronic brachytherapy device;
4. When shielding is required by subsection (C)(4), surveys shall be conducted to

ensure that the requirements of R9-7-408, R9-7-414, and R9-7-416 are met. Alternatively, a Qualified Medical Physicist shall designate shield locations sufficient to meet the requirements of R9-7-603(C) and R9-7-607(C) for any individual, other than the patient, in the treatment room; and

5. All personnel in the treatment room are required to remain behind shielding during treatment. A Qualified Medical Physicist shall approve any deviation from this requirement and shall designate alternative radiation safety protocols, compatible with patient safety, to provide an equivalent degree of protection.

I. Electronic Brachytherapy Source Calibration Measurements.

1. Calibration of the electronic brachytherapy source output shall be performed by, or under the direct supervision of, a Qualified Medical Physicist. If the control console is integral to the electronic brachytherapy device, the required procedures shall be kept where the operator is located during electronic brachytherapy device operation;
2. Calibration of the electronic brachytherapy source output shall be made for each electronic brachytherapy source, or after any repair affecting the x-ray beam generation, or when indicated by the electronic brachytherapy source quality assurance checks;
3. Calibration of the electronic brachytherapy source output shall utilize a dosimetry system appropriate for the energy output of the unit and calibrated by the National Institute for Standards and Technology (NIST) or by an American Association of Physicists in Medicine (AAPM) Accredited Dosimetry Calibration Laboratory (ADCL). The calibration shall have been performed within the previous 24 months and after any servicing that may have affected system calibration;
4. Calibration of the electronic brachytherapy source output shall include, as applicable, determination of:
 - a. The output within two percent of the expected value, if applicable, or determination of the output if there is no expected value;
 - b. Timer accuracy and linearity over the typical range of use;
 - c. Proper operation of back-up exposure control devices;
 - d. Evaluation that the relative dose distribution about the source is within five percent of that expected; and

- e. Source positioning accuracy to within one millimeter within the applicator;
5. Calibration of the x-ray source output required shall be in accordance with current published recommendations from a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of a calibration protocol published by a national professional association, the manufacturer's calibration protocol shall be followed.
 6. The registrant shall maintain a record of each calibration in an auditable form for the duration of the registration. The record shall include: the date of the calibration; the manufacturer's name, model number and serial number for the electronic brachytherapy device and a unique identifier for its electronic instrument or instruments brachytherapy source; the model numbers and serial numbers of the instrument or instruments used to calibrate the electronic brachytherapy device; and the name and signature of the Qualified Medical Physicist responsible for performing the calibration.
- J. Periodic and Day-of-Use Quality Assurance Checks for Electronic Brachytherapy Devices.**
1. Quality assurance checks shall be performed on each electronic brachytherapy device:
 - a. At the beginning of each day of use;
 - b. Each time the device is moved to a new room or site; and
 - c. After each x-ray tube installation.
 2. The registrant shall perform periodic quality assurance checks required in accordance with procedures established by the Qualified Medical Physicist;
 3. To satisfy the requirements of this subsection, radiation output quality assurance checks shall include at a minimum:
 - a. Verification that output of the electronic brachytherapy source falls within three percent of expected values, as appropriate for the device, as determined by:
 - i. Output as a function of time, or
 - ii. Output as a function of setting on a monitor chamber.
 - b. Verification of the consistency of the dose distribution to within three percent (or the manufacturer's or Qualified Medical Physicist's

- documented recommendation not to exceed five percent), observed at the source calibration required by subsection (I); and
- c. Validation of the operation of positioning methods to ensure that the treatment dose exposes the intended location within one millimeter; and
4. The registrant shall use a dosimetry system that has been intercompared within the previous 12 months with the dosimetry system described in this Section to make the quality assurance checks required in subsection (J)(3);
 5. The registrant shall review the results of each radiation output quality assurance check to ensure that:
 - a. An authorized user and Qualified Medical Physicist is immediately notified if any parameter is not within its acceptable tolerance, and the electronic brachytherapy device is not used until the Qualified Medical Physicist has determined that all parameters are within their acceptable tolerances;
 - b. If all radiation output quality assurance check parameters appear to be within their acceptable range, the acceptable quality assurance checklist shall be reviewed and signed by either the authorized user or Qualified Medical Physicist prior to the next patient use of the unit. In addition, the Qualified Medical Physicist shall review and sign the results of each radiation output quality assurance check at intervals not to exceed 30 days.
 6. To satisfy the requirements of subsection (J)(1), safety device quality assurance checks shall, at a minimum, assure:
 - a. Proper operation of radiation exposure indicator lights on the electronic brachytherapy device and on the control console;
 - b. Proper operation of viewing and intercom systems in each electronic brachytherapy facility, if applicable;
 - c. Proper operation of radiation monitors, if applicable;
 - d. The integrity of all cables, catheters or parts of the device that carry high voltages; and
 - e. Connecting guide tubes, transfer tubes, transfer-tube-applicator interfaces, and treatment spacers are free from any defects that interfere with proper operation.

7. If the results of the safety device quality assurance checks required in subsection (J)(6) indicate the malfunction of any system, a registrant shall secure the control console in the OFF position and not use the electronic brachytherapy device except as may be necessary to repair, replace, or check the malfunctioning system.
 8. The registrant shall maintain a record of each quality assurance check required by this Section in a legible form for three years.
 - a. The record shall include the date of the quality assurance check; the manufacturer's name, model number and serial number for the electronic brachytherapy device; the name and signature of the individual who performed the periodic quality assurance check and the name and signature of the Qualified Medical Physicist who reviewed the quality assurance check;
 - b. For radiation output quality assurance checks required by subsection (J) (3), the record shall also include the unique identifier for the electronic brachytherapy source and the manufacturer's name; model number and serial number for the instrument or instruments used to measure the radiation output of the electronic brachytherapy device.
- K.** Therapy-related Computer Systems. The registrant shall perform acceptance testing on the treatment planning system of electronic brachytherapy-related computer systems in accordance with current published recommendations from a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of an acceptance testing protocol published by a national professional association, the manufacturer's acceptance testing protocol shall be followed.
1. Acceptance testing shall be performed by, or under the direct supervision of a Qualified Medical Physicist. At a minimum, the acceptance testing shall include, as applicable, verification of:
 - a. The source-specific input parameters required by the dose calculation algorithm;
 - b. The accuracy of dose, dwell time, and treatment time calculations at representative points;
 - c. The accuracy of isodose plots and graphic displays;
 - d. The accuracy of the software used to determine radiation source

positions from radiographic images; and

e. If the treatment planning system is different from the treatment delivery system, the accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.

2. The position indicators in the applicator shall be compared to the actual position of the source or planned dwell positions, as appropriate, at the time of commissioning.

3. Prior to each patient treatment regimen, the parameters for the treatment shall be evaluated for correctness and approved by the authorized user and the Qualified Medical Physicist through means independent of that used for the determination of the parameters.

L. Training for e-brachytherapy Authorized Users.

1. The registrant for any therapeutic radiation machine subject to this Section shall require the authorized user to be a physician who is:

~~a.~~ ~~certified~~ Certified in:

~~a.i.~~ Radiation oncology or therapeutic radiology by the American Board of Radiology or radiology (combined diagnostic and therapeutic radiology program) by the American Board of Radiology prior to 1976; or

~~b.ii.~~ Radiation oncology by the American Osteopathic Board of Radiology; or

~~c.iii.~~ Radiology, with specialization in radiotherapy, as a British “Fellow of the Faculty of Radiology” or “Fellow of the Royal College of Radiology”; or

~~d.iv.~~ Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or

~~2.b.~~ ~~Is in~~ In the active practice of therapeutic radiology, and has completed 200 hours of instruction in basic radiation techniques applicable to the use of an external beam radiation therapy unit, 500 hours of supervised work experience, and a minimum of three years of supervised clinical experience.

~~a.2.~~ To satisfy the requirement in subsection (L)(1)(b) for:

- a. ~~instruction~~ Instruction, the classroom and laboratory training shall include:
- i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of ionization radiation; and
 - iv. Radiation biology;
- b. ~~To satisfy the requirement for supervised~~ Supervised work experience, training shall be under the supervision of an authorized user and shall include:
- i. Review of the full calibration measurements and periodic quality assurance checks;
 - ii. Evaluation of prepared treatment plans and calculation of treatment times or patient treatment settings or both;
 - iii. Using administrative controls to prevent medical events as described in R9-7-444;
 - iv. Implementing emergency procedures to be followed in the event of the abnormal operation of an external beam radiation therapy unit or console; and
 - v. Checking and using radiation survey meters; and
- c. ~~To satisfy the requirement for a~~ A period of supervised clinical experience, training shall include one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user. The supervised clinical experience shall include:
- i. Examining individuals and reviewing their case histories to determine their suitability for external beam radiation therapy treatment, and any limitations or contraindications or both;
 - ii. Selecting proper dose and how it is to be administered;
 - iii. Calculating the therapeutic radiation machine doses and

collaborating with the authorized user in the review of patients' progress and consideration of the need to modify originally prescribed doses or treatment plans as warranted by patients' reaction to radiation or both; and

iv. Post-administration follow-up and review of case histories.

3. A physician shall not act as an authorized user until such time as the physician's training has been reviewed and approved by the Department.

3.4. Notwithstanding the requirements of ~~this subsection~~ subsections (L)(1) through (L)(3), the registrant for any therapeutic radiation machine subject to this Section may also submit the training of the prospective authorized user physician for Department review on a case-by-case basis if the training includes substantially equivalent training as that listed in ~~subsection (L)(2)~~ subsections (L)(1)(b) and (L)(2) and the training includes dosimetry calculation training and experience.

~~4. A physician shall not act as an authorized user until such time as the physician's training has been reviewed and approved by the Department.~~

M. Training for Qualified Medical Physicist. The registrant for any therapeutic radiation machine subject to this Section shall require the Qualified Medical Physicist to:

1. Be certified with the Department, as a provider of radiation services in the area of calibration and compliance surveys of external beam radiation therapy units; and
2. Be certified by the American Board of Radiology in:
 - a. Therapeutic radiological physics; or
 - b. Roentgen-ray and gamma-ray physics; or
 - c. X-ray and radium physics; or
 - d. Radiological physics; or
3. Be certified by the American Board of Medical Physics in Radiation Oncology Physics; or
4. Be certified by the Canadian College of Physicists in Medicine; or
5. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university, and have completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of a Qualified Medical Physicist at a medical institution. This training and work experience shall be conducted in clinical radiation facilities that provide high-

energy external beam radiation therapy (photons and electrons with energies greater than or equal to one MV/one MeV). To meet this requirement, the individual shall have performed the tasks listed in this subsection under the supervision of a Qualified Medical Physicist during the year of work experience.

N. Qualifications of Operators.

Individuals who will be operating a therapeutic radiation machine for medical use shall be certified by the Department as a CTT by the Arizona Medical Radiologic Technology Board of Examiners.

O. Additional training requirements.

1. A registrant shall provide instruction, initially and at least annually, to all individuals who operate the electronic brachytherapy device, as appropriate to the individual's assigned duties, in the operating procedures identified in subsection (G). If the interval between patients exceeds one year, retraining of the individuals shall be provided.
2. In addition to the requirements of subsection (L) for therapeutic radiation machine authorized users and subsection (M) for Qualified Medical Physicists, these individuals shall also receive device-specific instruction initially from the manufacturer, and annually from either the manufacturer or other qualified trainer. The training shall be of a duration recommended by a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of any training protocol recommended by a national professional association, the manufacturer's training protocol shall be followed. The training shall include, but not be limited to:
 - a. Device-specific radiation safety requirements;
 - b. Device operation;
 - c. Clinical use for the types of use approved by the FDA;
 - d. Emergency procedures, including an emergency drill; and
 - e. The registrant's quality assurance program.
3. A registrant shall retain a record of individuals receiving ~~manufacturers~~ manufacturer's instruction for three years. The record shall include a list of the topics covered, the date of the instruction, the name or names of the attendee or attendees, and the name or names of the individual or individuals who provided the instruction.

- P.** Mobile Electronic Brachytherapy Service. A registrant providing mobile electronic brachytherapy service shall, at a minimum:
1. Check all survey instruments before medical use at each address of use or on each day of use, whichever is more restrictive;
 2. Account for the electronic brachytherapy x-ray tube in the electronic brachytherapy device before departure from the client's address; and
 3. Perform, at each location on each day of use, all of the required quality assurance checks specified in this Section to assure proper operation of the device.
- Q.** Medical events shall be reported to the Department. For purposes of this Section "medical event" means a therapeutic radiation dose from a machine:
1. Delivered to the wrong patient;
 2. Delivered using the wrong mode of treatment;
 3. Delivered to the wrong treatment site; or
 4. Delivered in one week to the correct patient, using the correct mode, to the correct therapy site, but greater than 130 percent of the prescribed weekly dose;
- or
- R.** A therapeutic radiation dose from a machine with errors in the calibration, time of exposure, or treatment geometry that result in a calculated total treatment dose differing from the final, prescribed total treatment dose by more than 20 percent, except for treatments given in 1 to 3 fractions, in which case a difference of more than 10 percent constitutes a medical event.
- S.** Reports of therapy medical events:
1. Within 24 hours after discovery of a medical event, a registrant shall notify the Department by telephone by speaking to a Department staff member. The registrant shall also notify the referring physician of the affected patient and the patient or a responsible relative or guardian, unless the referring physician personally informs the registrant either that he or she will inform the patient, or that in his or her medical judgment, telling the patient or the patient's responsible relative or guardian would be harmful to one or the other, respectively. If the Department staff member, referring physician, or the patient's responsible relative or guardian cannot be reached within 24 hours, the registrant shall notify them as soon as practicable. The registrant shall not delay medical care for the patient because of notification problems.

2. Within 15 days following the verbal notification to the Department, the registrant shall report, in writing, to the Department and individuals notified under subsection (S)(1). The written report shall include the registrant's name, the referring physician's name, a brief description of the event, the effect on the patient, the action taken to prevent recurrence, whether the registrant informed the patient or the patient's responsible relative or guardian, and if not, why not. The report shall not include the patient's name or other information that could lead to identification of the patient.
3. Each registrant shall maintain records of all medical events for Department inspection. The records shall:
 - a. Contain the names of all individuals involved in the event, including:
 - i. The physician,
 - ii. The allied health personnel,
 - iii. The patient,
 - iv. The patient's referring physician,
 - v. The patient's identification number if one has been assigned,
 - vi. A brief description of the event,
 - vii. The effect on the patient, and
 - viii. The action taken to prevent recurrence.
 - b. Be maintained for three years beyond the termination date of the affected registration.

R9-7-613. Veterinary Medicine Radiographic Systems

- A. Equipment. A registrant shall ensure that:
 1. ~~Before January 2, 1996, the~~ The total filtration permanently in the useful beam is not less than 1.5 millimeters aluminum-equivalent for equipment operating at up to 70 kVp and 2.0 millimeters aluminum-equivalent for equipment operating in excess of 70 kVp;
 2. A device is provided to terminate the exposure after a preset time or exposure;
 3. Each radiographic system has a "dead-man" exposure switch with an electrical cord of sufficient length to allow the operator to stand at least 1.82 meters (six feet) away from the useful beam during x-ray exposures.
- B. Procedures: A registrant shall ensure that:
 1. Unless required to restrain an animal, the operator stands at least 1.82 meters (6

- feet) away from the useful beam and the animal during a radiographic exposure;
2. An individual other than the operator is not in the x-ray room or area while an exposure is being made, unless the individual's assistance is required;
 3. If possible, an animal is held in position during an x-ray exposure using mechanical supporting or restraining devices;
 4. An individual holding an animal during an x-ray exposure is:
 - a. Wearing protective gloves and an apron of not less than 0.5 millimeter lead equivalent or positioned behind a whole-body protective barrier;
 - b. Wearing required personnel monitoring devices; and
 - c. Positioned so that no part of the person's body, except hands and arms, will be struck by the useful beam;
 5. If an individual holds or supports an animal or a film during an x-ray exposure, the name of the individual is recorded in an x-ray log that contains the animal's name, the type of x-ray procedure, the number of exposures, and the date of the procedure; and
 6. As a condition of employment an individual is not required to routinely hold or support animals, or hold film during radiation exposures.

ARTICLE 7. MEDICAL USES OF RADIOACTIVE MATERIAL

R9-7-710. Radiation Safety Officer Training

- A. A licensee shall require an individual fulfilling the responsibilities of the radiation safety officer, described in R9-7-705, to be an individual who:
1. Is certified by a specialty board whose certification process includes all of the requirements in subsection (A)(2) and whose certification has been recognized by the Department, the NRC, or an Agreement State. To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Meet the following minimum requirements:
 - i. Hold a bachelor's or graduate degree from an accredited college or university in physical science or engineering or biological science with a minimum of 20 college credits in physical science;
 - ii. Have five or more years of professional experience in health physics (graduate training may be substituted for no more than two years of the required experience) including at least three years in applied health physics; and
 - iii. Pass an examination administered by diplomates of the specialty board, which evaluates knowledge and competence in radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology, and radiation dosimetry; or
 - b. Meet the following minimum requirements:
 - i. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
 - ii. Have two years of full-time practical training and/or supervised experience in medical physics;
 - (1) Under the supervision of a medical physicist who is certified in medical physics by a specialty board

recognized by the Commission or an Agreement State;

or

(2) In clinical nuclear medicine facilities providing diagnostic and/or therapeutic services under the direction of physicians who meet the requirements for authorized users qualified under section ~~R9-7-710(B)~~ subsection (B), R9-7-721, or R9-7-723;

iii. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical diagnostic radiological or nuclear medicine physics and in radiation safety; or

2. Has completed a structured educational program consisting of both:

a. 200 hours of didactic and laboratory training in the following areas:

i. Radiation physics and instrumentation;

ii. Radiation protection;

iii. Mathematics pertaining to the use and measurement of radioactivity;

iv. Radiation biology; and

v. Radiation dosimetry; and

b. One year of full-time radiation safety experience under the supervision of the individual identified as the radiation safety officer on a Department, a NRC, or an Agreement State license or permit issued by a NRC master material licensee that authorizes similar type(s) of use(s) of radioactive material involving the following:

i. Shipping, receiving, and performing related radiation surveys;

ii. Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides;

iii. Securing and controlling radioactive material;

iv. Using administrative controls to avoid mistakes in the administration of radioactive material;

v. Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures;

- vi. Using emergency procedures to control radioactive material; and
 - vii. Disposing of radioactive material; or
 - c. Has obtained written certification, signed by a preceptor radiation safety officer, that the individual has satisfactorily completed the requirements in subsection (A)(2)(a) and (A)(2)(b) and has achieved a level of radiation safety knowledge sufficient to function independently as a radiation safety officer for a medical use licensee; or
 - 3. Is an authorized user, authorized medical physicist, or authorized nuclear pharmacist identified on the licensee's license and has experience with the radiation safety aspects of similar types of use of radioactive material for which the individual has radiation safety officer responsibilities.
- B. Exceptions.**
- 1. An individual identified as a radiation safety officer on a Department, a NRC, or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsections (A)(1) through (A)(3).
 - 2. A physician, dentist, or podiatrist identified as an authorized user for the medical use of radioactive material on a license issued by the Department, the NRC, or an Agreement State, a permit issued by a NRC master material licensee, a permit issued by the Department, the NRC, or an Agreement State broad scope licensee, or a permit issued by a NRC master material license broad scope permittee before the effective date of these rules need not comply with the training requirements in this Article.
- C.** The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- D.** Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Department licenses for the same uses for which these individuals are authorized.

R9-7-711. Authorized Medical Physicist Training

- A.** A licensee shall require an authorized medical physicist to be an individual who:

1. Is certified by a specialty board whose certification process includes all of the training and experience requirements in subsection (A)(3)(b) and (A)(3)(c) and whose certification has been recognized by the Department, the NRC, or an Agreement State; or
2. Training requirements.
 - a. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
 - b. Have two years of full-time practical training and/or supervised experience in medical physics:
 - i. Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the NRC or an Agreement State; or
 - ii. In clinical radiation facilities providing high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services under the direction of physicians who meet the requirements for authorized users in R9-7-710, R9-7-719, R9-7-721, R9-7-723, R9-7-727, R9-7-728, or R9-7-744; and
 - c. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical radiation therapy, radiation safety, calibration, quality assurance, and treatment planning for external beam therapy, brachytherapy, and stereotactic radiosurgery; or
3. Training requirements alternative.
 - a. Holds a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university; and has completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of an individual who meets the requirements for an authorized medical physicist for the type(s) of use for which the individual is seeking authorization. This training and work experience must be conducted in clinical radiation facilities that provide high-

energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services and must include:

- i. Performing sealed source leak tests and inventories;
 - ii. Performing decay corrections;
 - iii. Performing full calibration and periodic spot checks of external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and
 - iv. Conducting radiation surveys around external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and
- b. Has obtained written attestation that the individual has satisfactorily completed the requirements in ~~subsection (A)(3)(e) and (A)(2)(a) and (A)(2)(b) and (A)(3)(e)~~ both subsections (A)(2) and (A)(3)(c), or in both subsections (A)(3)(a) and (A)(3)(c); and has achieved a level of competency sufficient to function independently as an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status. The written attestation must be signed by a preceptor authorized medical physicist who meets the requirements in section, or equivalent Agreement State requirements for an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status; and
- c. Has training for the type(s) of use for which authorization is sought that includes hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system. This training requirement may be satisfied by satisfactorily completing either a training program provided by the vendor or by training supervised by an authorized medical physicist authorized for the type(s) of use for which the individual is seeking authorization.

B. Exceptions. An individual identified as a teletherapy or medical physicist on a Department, a NRC, or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master

material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsection (A).

- C. The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- D. Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Department licenses for the same uses for which these individuals are authorized.

R9-7-719. Training for Uptake, Dilution, and Excretion Studies

- A. Except as provided in R9-7-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 100 to be a physician who:
 - 1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(3). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Complete 60 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies as described in subsection (A)(3); and
 - b. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or
 - 2. Is an authorized user under R9-7-721, R9-7-723, the NRC, or equivalent Agreement State requirements; or
 - 3. Has completed 60 hours of training and experience, including a minimum of eight hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies. The training and experience must include:
 - a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of

- radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. Work experience, under the supervision of an authorized user who meets the requirements in this Article, NRC, or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
 - iii. Calculating, measuring, and safely preparing patient or human research subject dosages;
 - iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
 - v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
 - vi. Administering dosages of radioactive drugs to patients or human research subjects; and
 - c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements of ~~R9-7-710~~, R9-7-719, R9-7-721, or R9-7-723, the NRC, or equivalent Agreement State requirements; that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(3) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article.
- B.** The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- C.** Individuals who, under R9-7-710(B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Department licenses for the same uses for which these individuals are authorized.

R9-7-721. Training for Imaging and Localization Studies Not Requiring a Written Directive

- ~~A.~~ Except as provided in R9-7-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 200 to be a physician who:
1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection ~~(A)(3)~~ (3). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for imaging and localization studies as described in subsection (3); and
 - b. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or
 2. Is an authorized user under ~~this Chapter and~~ R9-7-723, the NRC, or equivalent Agreement State requirements; or
 3. Has completed 700 hours of training and experience, including a minimum of 80 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for imaging and localization studies. The training and experience must include:
 - a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. Work experience, under the supervision of an authorized user who meets the requirements in R9-7-710, R9-7-721, or R9-7-723 and ~~R9-7-721(A)(3)(b)(vii)~~, in subsection (3)(b)(vii); the requirements of the NRC; or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely

- and performing the related radiation surveys;
- ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
- iii. Calculating, measuring, and safely preparing patient or human research subject dosages;
- iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
- v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
- vi. Administering dosages of radioactive drugs to patients or human research subjects; and
- vii. Eluting generator systems appropriate for preparation of radioactive drugs for imaging and localization studies, measuring and testing the elate for radionuclide purity, and processing the elate with reagent kits to prepare labeled radioactive drugs; and,
- c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements as an authorized user for Exhibit A group 200 nuclides, NRC, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in subsection ~~(A)(1) or (A)(3)~~ (1) or (3) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article.

B. ~~The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.~~

Exhibit A. Medical Use Groups

Group 100

Included is the use of any unsealed radioactive material for use in uptake, dilution, or excretion studies and not requiring a written directive: The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R9-7-703(C)(2)(a), or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R9-7-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R9-7-712, a physician who is an authorized user and who meets the requirements specified in R9-7-721, or R9-7-723 and ~~R9-7-721(A)(3)(b)(vii)~~ R9-7-721(3)(b)(vii), or an individual under the supervision of either as specified in R9-7-706; or
3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

Group 200

Included is the use of any unsealed radioactive material for use in imaging and localization not requiring a written directive. PET radiopharmaceuticals may be used if the licensee meets the requirements in R9-7-716. The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R9-7-703(C)(2)(a), or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R9-7-703 or an equivalent NRC or ~~an~~ Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R9-7-712, a physician who is an authorized user and who meets the requirements specified in R9-7-721, or R9-7-723 and ~~R9-7-721(A)(3)(b)(vii)~~

R9-7-721(3)(b)(vii), or an individual under the supervision of either as specified in R9-7-706; or

3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with a Radioactive Drug Research Committee- approved application or an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

Group 300

Included is the use of any unsealed radioactive material for medical use (radiopharmaceutical) for which a written directive is required. The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R9-7-703(C)(2)(a) or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R9-7-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R9-7-712, a physician who is an authorized user and who meets the requirements specified in R9-7-721 or R9-7-723, or an individual under the supervision of either as specified in R9-7-706; or
3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA.

Group 400

Included is the use of any brachytherapy source for therapeutic medical use that is manufactured in accordance with R9-7-703(C)(2)(b) and:

1. Approved for therapeutic use in the Sealed Source and Device Registry; or
2. Part of a research protocol that is approved for therapeutic use under an active Investigational Device Exemption (IDE) application accepted by the FDA, and

meets the requirements of R9-7-709.

Group 500

Included is the use of any sealed source that is manufactured in accordance with R9-7-703(C)(2)(b), and is approved for diagnostic use in the Sealed Source and Device Registry.

Group 600

Included is the use of sealed sources in photon emitting remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units that are manufactured in accordance with R9-7-703(C)(2)(b) and:

1. Approved for therapeutic use in the Sealed Source and Device Registry; or
2. Part of a research protocol that is approved for therapeutic use under an active Investigational Device Exemption (IDE) application accepted by the FDA and meets the requirements of R9-7-709.

Group 1000

A licensee may use radioactive material or a radiation source approved for medical use which is not specifically addressed in ~~R9-7-309(A)(4)~~ R9-7-309(4) if:

1. The applicant or licensee has submitted the information required by this Article; and
2. The applicant or licensee has received written approval from the Department in a license or license amendment and uses the material in accordance with the rules and specific conditions the Department considers necessary for the medical use of the material.

**ARTICLE 10. NOTICES, INSTRUCTIONS, AND REPORTS TO RADIATION
WORKERS; INSPECTIONS**

R9-7-1006. Consultation with Workers During Inspections

- A.** A licensee or registrant shall afford Department inspectors talking to a licensee or registrant representative the opportunity to consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of Department rules, licenses, and registrations to the extent the inspectors deem consultation necessary for conducting an effective and thorough inspection.
- B.** During the course of an inspection, any worker may privately bring to the attention of the inspectors, either orally or in writing, any past or present condition which the worker has reason to believe may have contributed to or caused any violation of the Act, these rules, or a license or registration condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material or a registered radiation machine under the licensee's or registrant's control. If this notification is in writing, the worker shall comply with the requirements of R9-7-1007(A).
- C.** The provisions of ~~R9-7-1006(B)~~ subsection (B) shall not be interpreted as authorization to disregard instructions required by R9-7-1003.

ARTICLE 15. TRANSPORTATION

R9-7-1507. Packaging Quality Assurance

- A.** A licensee that transports radioactive material in the course of business or delivers radioactive material to a carrier for transport in a package for which a license, certificate of compliance, applicant for a certificate of compliance, or other approval has been issued by the Nuclear Regulatory Commission, or meets the applicable criteria (10 CFR 71, Subpart H, revised January 1, 2008, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.), shall establish, maintain, and execute the quality assurance program specified in 10 CFR 71, Subpart H.
- B.** In addition to the requirements in subsection (A) for a quality assurance program, a licensee shall verify by procedures such as checking or inspection, that deficiencies or defective material or equipment relative to the shipment of packages containing radioactive material are promptly identified and corrected.
- C.** Before the first use of any Type B packaging, a licensee shall obtain approval of its quality assurance program by the Department.
- D.** A licensee shall maintain sufficient written records to demonstrate compliance with the quality assurance program. Records of quality assurance pertaining to the use of a Type B package for shipment of radioactive material shall be maintained for three years after the package is used for a shipment.

R9-7-1508. Advance Notification of Nuclear Waste Transportation

- A.** Prior to the transport of any nuclear waste, as defined in Article 1, outside of the confines of the licensee's facility or other place of use or storage, or prior to the delivery of any nuclear waste to a carrier for transport, each licensee shall provide advance notification of such transport to the Department.
- B.** Each advance notification required in subsection (A) above shall contain the following information:
 - 1. The name, address, and telephone number of the shipper, carrier, and receiver of the shipment;
 - 2. A description of the nuclear waste contained in the shipment as required by 49 CFR 172.202 and 172.203(d) (Revised October 1, 2007, incorporated by

reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.);

3. The point of origin of the shipment and the seven-day period during which departure of the shipment will occur;
 4. The seven-day period during which arrival of the shipment at state boundaries will occur;
 5. The destination of the shipment, and the seven-day period during which arrival of the shipment will occur; and
 6. A point of contact with a telephone number for current shipment information.
- C.** The licensee shall make the notification required by subsection (A) in writing to the Department. A notification delivered by mail must be postmarked at least seven days before the beginning of the seven-day period during which departure of the shipment is estimated to occur. The licensee shall maintain a copy of the notification for one year.
- D.** The licensee shall notify the Department of any changes in shipment plans, including cancellations, rerouting, or rescheduling, provided pursuant to subsection (A). Such notification shall be by telephoning the Department. The licensee shall maintain for one year a record of the name of the individual contacted.
- E.** After June 11, 2013, each licensee shall provide advance notification to the Tribal official of participating Tribes referenced in paragraph (c)(3)(iii) of 10 CFR 71.97, or the official's designee, of the shipment of licensed material, within or across the boundary of the Tribe's reservation, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.

R9-7-1510. Packaging

- A.** A general license is issued to any licensee to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance, or other approval has been issued by the NRC.
1. This general license applies only to a licensee that has a quality assurance program approved by the Department as satisfying R9-7-1507;
 2. This general license applies only to a licensee that:
 - a. Has a copy of the license, certificate of compliance, or other approval of the package, and has the drawings and other documents referenced in the approval relating to the use and maintenance of the packaging and to the

- actions to be taken before shipment;
- b. Complies with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of this Article; ~~and~~
 - c. Before the licensee's first use of the package, submits in writing to the Department and to ATTN: Document Control Desk, Director, Division of Spent Fuel Storage and Transportation, Office of Nuclear Material Safety and Safeguards, using an appropriate method listed in 10 CFR 71.1(a), the licensee's name, license number, and the package identification number specified in the package approval;
 - d. Each certificate holder shall maintain, for a period of three years after the life of the packaging to which they apply. Records identifying the packaging by model number, serial number and date of manufacture;
 - e. The licensee, certificate holder, and an applicant for a CoC, shall make available to the Commission for inspection, upon reasonable notice, all records required by this part. Records are only valid if stamped, initialed, or signed and dated by authorized personnel, or otherwise authenticated;
and
 - f. The licensee, certificate holder, and an applicant for a CoC shall maintain sufficient written records to furnish evidence of the quality of packaging. The records to be maintained include results of the determinations required by 10 CFR 71.85; design, fabrication, and assembly records; results of reviews, inspections, tests, and audits; results of monitoring work performance and materials analyses; and results of maintenance, modification, and repair activities. Inspection, test, and audit records must identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. These records must be retained for three years after the life of the packaging to which they apply.
3. This general license applies only when the package approval authorizes use of the package under this general license.
4. For a Type B or fissile material package, the design of which was approved by NRC before April 1, 1996, the general license is subject to the additional

restrictions of subsection (B).

B. Type B packages.

1. ~~A Type B package previously approved by NRC but not designated as B(U) or B(M) in the identification number of the NRC Certificate of Compliance, may be used under the general license of subsection (A) with the following additional conditions:~~
 - a. ~~Fabrication of the packaging is satisfactorily completed by August 31, 1986, as demonstrated by application of its model number in accordance with 10 CFR 71.85(c) (Revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.);~~
 - b. ~~A package that is used for a shipment to a location outside the United States is subject to multilateral approval, as defined in 49 CFR 173.403 (Revised October 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.); and~~
 - c. ~~A serial number that uniquely identifies each package which conforms to the approved design and is assigned to, and legibly and durably marked on, the outside of each package.~~
 - d. ~~The licensee shall ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce the effectiveness of the packaging;~~
 - e. ~~Where the maximum normal operating pressure will exceed 35 kPa (5 lbf/in²) gauge, the licensee shall test the containment system at an internal pressure at least 50 percent higher than the maximum normal operating pressure, to verify the capability of that system to maintain its structural integrity at that pressure; and~~
1. Before the first use of any packaging for the shipment of licensed material, refer to 10 CFR 71.85 (a), (b) and (c).
2. A Type B(U) package, a Type B(M) package, a low specific activity (LSA) material package or a fissile material package, previously approved by the NRC but without the “-85” designation in the identification number of the NRC certificate of compliance, may be used under the general license of subsection

- (A) with the following additional conditions:
- a. Fabrication of the packaging is satisfactorily completed by April 1, 1999 as demonstrated by application of its model number in accordance with 10 CFR 71.85(c) (Revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.);
 - b. A package that is used for a shipment to a location outside the United States is subject to multilateral approval as defined in 49 CFR 173.403 (Revised October 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.); and
 - c. A serial number which uniquely identifies each package which conforms to the approved design and is assigned to, and legibly and durably marked on, the outside of each package.
3. A licensee may modify the design and authorized contents of a Type B package, or a fissile material package, previously approved by NRC, provided:
- a. The modifications of a Type B package are not significant with respect to the design, operating characteristics, or safe performance of the containment system, when the package is subjected to the tests specified in 10 CFR 71.71 and 71.73 (Revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.);
 - b. The modifications of a fissile material package are not significant, with respect to the prevention of criticality, when the package is subjected to the tests specified in 10 CFR 71.71 and 71.73 (Revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.); and
 - c. The modifications to the package satisfy the requirements of this Section.
4. The NRC will revise the package identification number to designate previously approved package designs as B(U), B(M), AF, BF, or A as applicable, and with the identification number suffix “-85” after receipt of an application demonstrating that the design meets the requirements of this Section.
5. For purposes of this Section, package types are defined in 10 CFR 71.4, revised

January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.

- C. A general license is issued to any licensee of the Department to transport fissile material, or to deliver to a carrier for transport, licensed material in a specification container for fissile material or for a Type B quantity of radioactive material as specified in 49 CFR 173 and 178 (Revised October 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.), if the following requirements are met:
1. The licensee shall maintain a quality assurance program approved by the Department as satisfying R9-7-1507.
 2. The licensee shall:
 - a. Maintain a copy of the specification; and
 - b. Comply with the terms and conditions of the specification and the applicable requirements in 10 CFR 71, Subparts A, G, and H, revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
 3. The licensee may not use the specification container for a shipment to a location outside the United States, except by multilateral approval, as defined in 49 CFR 173.403, revised October 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
 4. The general license applies only when a package's contents:
 - a. Contain no more than a Type A quantity of radioactive material; and
 - b. Contain less than 500 total grams of beryllium, graphite, or hydrogenous material enriched in deuterium.
 5. The general license applies only to packages containing fissile material that are labeled with a CSI which:
 - a. Has been determined in accordance with subsection (E);
 - b. Has a value less than or equal to 10; and
 - c. For a shipment of multiple packages containing fissile material, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).

6. The CSI value must meet the following requirements:
 - a. The value for the CSI must be greater than or equal to the number calculated by the following equation: $CSI=10[(\text{grams of } ^{235}\text{U}/X) + (\text{grams of } ^{235}\text{U}/Y) + \text{grams of } ^{235}\text{U}/Z]$;
 - b. The calculated CSI must be rounded up to the first decimal place;
 - c. The values of X, Y, and Z used in the CSI equation must be taken from Tables 71–1 or 71–2 as appropriate located in 10 CFR 71.22, (revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.);
 - d. If Table 71–2 is used to obtain the value of X, then the values for the terms in the equation for uranium-233 and plutonium must be assumed to be zero; and
 - e. Table 71–1 values for X, Y, and Z must be used to determine the CSI if:
 - i. Uranium-233 is present in the package;
 - ii. The mass of plutonium exceeds 1 percent of the mass of uranium-235;
 - iii. The uranium is of unknown uranium-235 enrichment or greater than 24 weight percent enrichment; or
 - iv. Substances having a moderating effectiveness (i.e., an average hydrogen density greater than H₂O) (e.g., certain hydrocarbon oils or plastics) are present in any form, except as polyethylene used for packing or wrapping.

D. Foreign packaging.

1. A general license is issued to any licensee of the Department to transport, or to deliver to a carrier for transport, licensed material in a package the design of which has been approved in a foreign national competent authority certificate that has been revalidated by the Federal Department of Transportation as meeting the applicable requirements of ~~49 CFR 171.12~~ 49 CFR 171.23, revised October 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
2. Except as otherwise provided in this Section, the general license applies only to a licensee who has a quality assurance program approved by the Department as

satisfying the applicable provisions of R9-7-1507.

3. This general license applies only to:
 - a. Shipments made to or from locations outside the United States.
 - b. A licensee that:
 - i. Has a copy of the applicable certificate, the revalidation, and the drawings and other documents referenced in the certificate, relating to the use and maintenance of the packaging and to the actions to be taken before shipment; and
 - ii. Complies with the terms and conditions of the certificate and revalidation, and with the applicable requirements in 10 CFR 71, Subparts A, G, and H, revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments. ~~With respect to the quality assurance provisions of Subpart H of the regulations, the licensee is exempt from design, construction, and fabrication requirements.~~

~~**E.** Assumptions as to unknown properties. When the isotopic abundance, mass, concentration, degree of irradiation, degree of moderation, or other pertinent property of fissile material in any package is not known, the licensee shall package the fissile material as if the unknown properties have credible values that will cause the maximum neutron multiplication.~~

F.E. Routine determination before each shipment of licensed material shall ensure that the package with its contents satisfies the applicable requirements of this Article and of the license. The licensee shall determine that:

1. The package is proper for the contents to be shipped;
2. The package is in unimpaired physical condition except for superficial defects such as marks or dents;
3. Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;
4. Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;
5. Any pressure relief device is operable and set in accordance with written procedures;

6. The package has been loaded and closed in accordance with written procedures;
7. For fissile material, any moderator or neutron absorber, if required, is present and in proper condition;
8. Any structural part of the package that could be used to lift or tie down the package during transport is rendered inoperable for that purpose, unless it satisfies the design requirements of 10 CFR 71.45 (revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.);
9. The level of non-fixed (removable) radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable, and within the limits specified in DOT regulations in 49 CFR 173.443 (revised October 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.);
10. External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in 10 CFR 71.47 (revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.), at any time during transportation; and
11. Accessible package surface temperatures will not exceed the limits specified in 10 CFR 71.43(g) (revised January 1, 2010, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.), at any time during transportation.

F. Fissile material meeting the requirements of at least one of the conditions in subsections (F)(1) through (F)(6) are exempt from classification as fissile material and from the fissile material package standards of 10 CFR 71.55 and 71.59, but are subject to all other requirements of this part, except as noted.

1. Individual package containing 2 grams or less fissile material.
2. Individual or bulk packaging containing 15 grams or less of fissile material provided the package has at least 200 grams of solid nonfissile material for every gram of fissile material. Lead, beryllium, graphite, and hydrogenous material enriched in deuterium may be present in the package but must not be included in determining the required mass for solid nonfissile material.
3. Low concentrations of solid fissile material commingled with solid nonfissile

material, provided that:

- a. There is at least 2000 grams of solid nonfissile material for every gram of fissile material;
 - b. There is no more than 180 grams of fissile material distributed within 360 kg of contiguous nonfissile material; and
 - c. Lead, beryllium, graphite, and hydrogenous material enriched in deuterium may be present in the package but must not be included in determining the required mass of solid nonfissile material.
4. Uranium enriched in uranium-235 to a maximum of 1 percent by weight, and with total plutonium and uranium-233 content of up to 1 percent of the mass of uranium-235, provided that the mass of any beryllium, graphite, and hydrogenous material enriched in deuterium constitutes less than 5 percent of the uranium mass, and that the fissile material is distributed homogeneously and does not form a lattice arrangement within the package.
 5. Liquid solutions of uranyl nitrate enriched in uranium-235 to a maximum of 2 percent by mass, with a total plutonium and uranium-233 content not exceeding 0.002 percent of the mass of uranium, and with a minimum nitrogen to uranium atomic ratio (N/U) of 2. The material must be contained in at least a DOT Type A package.
 6. Packages containing, individually, a total plutonium mass of not more than 1000 grams, of which not more than 20 percent by mass may consist of plutonium-239, plutonium-241, or any combination of these radionuclides.

R9-7-1512. Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste

- A.** A licensee shall provide advance notification to the Governor, or the Director of the Department, of the shipment of licensed material as specified in 10 CFR 71.97, revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
- B.** After June 11, 2013, each licensee shall provide advance notification to the Tribal official of participating Tribes referenced in paragraph (c)(3)(iii) of 10 CFR 71.97, or the Tribal official's designee, of the shipment of licensed material, within or across the boundary of the Tribe's reservation, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or

storage.

- C.** Advance notification is also required under this section for the shipment of licensed material, other than irradiated fuel, meeting the following three conditions:
1. The licensed material is required by this part to be in Type B packaging for transportation;
 2. The licensed material is being transported to or across a State boundary en route to a disposal facility or to a collection point for transport to a disposal facility; and
 3. The quantity of licensed material in a single package exceeds the least of the following:
 - a. 3000 times the A1 value of the radionuclides as specified in appendix A, Table A-1 for special form radioactive material;
 - b. 3000 times the A2 value of the radionuclides as specified in appendix A, Table A-1 for normal form radioactive material; or
 - c. 1000 TBq (27,000 Ci).
- D.** Procedures for submitting advance notification. (1) The notification must be made in writing to:
1. The office of each appropriate governor or governor's designee;
 2. The office of each appropriate Tribal official or Tribal official's designee; and
 3. The Director, Division of Security Policy, Office of Nuclear Security and Incident Response.

R9-7-1515. Exemption for Low-level Radioactive Materials

- A.** A licensee is exempt from all the requirements of 10 CFR 71 with respect to shipment or carriage of the low-level materials listed in 10 CFR 71.14(a), revised January 1, 2008, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments.
- B.** Natural material and ores containing naturally occurring radionuclides that are either in their natural state, or have only been processed for purposes other than for the extraction of the radionuclides, and which are not intended to be processed for the use of these radionuclides, provided the activity concentration of the material does not exceed 10 times the applicable radionuclide activity concentration values specified in appendix A, Table A-2, or Table A-3 of this part.
- C.** Materials for which the activity concentration is not greater than the activity

concentration values specified in appendix A, Table A-2, or Table A-3 of this part, or for which the consignment activity is not greater than the limit for an exempt consignment found in appendix A, Table A-2, or Table A-3 of 10 CFR 71 Appendix A.

- D.** Non-radioactive solid objects with radioactive substances present on any surfaces in quantities not in excess of the levels cited in the definition of contamination in 10 CFR 71.4.

**ARTICLE 19. PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2
QUANTITIES OF RADIOACTIVE MATERIAL**

R9-7-1927. Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material

A. General performance objective and requirements:

1. Except for those individuals listed in R9-7-1929 and those individuals grandfathered under R9-7-1925(B), each licensee subject to the provisions of this Article shall fingerprint each individual who is to be permitted unescorted access to category 1 or category 2 quantities of radioactive material. Licensees shall transmit all collected fingerprints to the Department for transmission to the FBI. The licensee shall use the information received from the FBI as part of the required background investigation to determine whether to grant or deny further unescorted access to category 1 or category 2 quantities of radioactive materials for that individual.
2. The licensee shall notify each affected individual that his or her fingerprints will be used to secure a review of his or her criminal history record, and shall inform him or her of the procedures for revising the record or adding explanations to the record.
3. Fingerprinting is not required if a licensee is reinstating an individual's unescorted access authorization to category 1 or category 2 quantities of radioactive materials if:
 - a. The individual returns to the same facility that granted unescorted access authorization within 365 days of the termination of his or her unescorted access authorization; and
 - b. The previous access was terminated under favorable conditions.
4. Fingerprints do not need to be taken if an individual who is an employee of a licensee, contractor, manufacturer, or supplier has been granted unescorted access to category 1 or category 2 quantities of radioactive material, access to safeguards information, or safeguards information-modified handling by another

licensee, based upon a background investigation conducted under this Article, the Fingerprint Orders, or 10 CFR part 73, revised January 1, 2015, incorporated by reference, and available under R9-7-101. This incorporated material contains no future editions or amendments. An existing criminal history records check file may be transferred to the licensee asked to grant unescorted access in accordance with the provisions of R9-7-1931(C).

5. Licensees shall use the information obtained as part of a criminal history records check solely for the purpose of determining an individual's suitability for unescorted access authorization to category 1 or category 2 quantities of radioactive materials, access to safeguards information, or safeguards information-modified handling.

B. Prohibitions:

1. Licensees may not base a final determination to deny an individual unescorted access authorization to category 1 or category 2 quantities of radioactive material solely on the basis of information received from the FBI involving:
 - a. An arrest more than 1 year old for which there is no information of the disposition of the case; or
 - b. An arrest that resulted in dismissal of the charge or an acquittal.
2. Licensees may not use information received from a criminal history records check obtained under this section in a manner that would infringe upon the rights of any individual under the First Amendment to the Constitution of the United States, nor shall licensees use the information in any way that would discriminate among individuals on the basis of race, religion, national origin, gender, or age.

C. Procedures for processing of fingerprint checks:

1. For the purpose of complying with this Article, licensees shall use an appropriate method listed in 10 CFR 37.7, revised January 1, 2015, incorporated by reference, available under R9-7-101, and containing no future editions or amendments; to submit to the U.S. Nuclear Regulatory Commission, Director, Division of Facilities and Security, 11545 Rockville Pike, ATTN: Criminal History Program/Mail Stop TWB-05 B32M, Rockville, Maryland 20852, one completed, legible standard fingerprint card (Form FD-258, ORIMDNRCOOOZ), electronic fingerprint scan or, where practicable, other fingerprint record for each individual requiring unescorted access to category 1

or category 2 quantities of radioactive material. Copies of these forms may be obtained by writing the ~~Office of Information Services~~ Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling 1-630-829-9565, or by email to FORMS.Resource@nrc.gov. Guidance on submitting electronic fingerprints can be found at <http://www.nrc.gov/site-help/e-submittals.html>.

2. Fees for the processing of fingerprint checks are due upon application. Licensees shall submit payment with the application for the processing of fingerprints through corporate check, certified check, cashier's check, money order, or electronic payment, made payable to "U.S. NRC." (For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security at 301-492-3531.) Combined payment for multiple applications is acceptable. The Commission publishes the amount of the fingerprint check application fee on the NRC's public website. (To find the current fee amount, go to the Electronic Submittals page at <http://www.nrc.gov/site-help/e-submittals.html> and see the link for the Criminal History Program under Electronic Submission Systems.)
3. The U.S. Nuclear Regulatory Commission will forward to the submitting licensee all data received from the FBI as a result of the licensee's application(s) for criminal history records checks.

R9-7-1943. General Security Program Requirements

A. Security plan:

1. Each licensee identified in R9-7-1941(A) shall develop a written security plan specific to its facilities and operations. The purpose of the security plan is to establish the licensee's overall security strategy to ensure the integrated and effective functioning of the security program required by this Article. The security plan shall, at a minimum:
 - a. Describe the measures and strategies used to implement the requirements of this Article; and
 - b. Identify the security resources, equipment, and technology used to satisfy the requirements of this Article.
2. The security plan shall be reviewed and approved by the individual with overall responsibility for the security program.

3. A licensee shall revise its security plan as necessary to ensure the effective implementation of Department requirements. The licensee shall ensure that:
 - a. The revision has been reviewed and approved by the individual with overall responsibility for the security program; and
 - b. The affected individuals are instructed on the revised plan before the changes are implemented.
 4. The licensee shall retain a copy of the current security plan as a record for 3 years after the security plan is no longer required. If any portion of the plan is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.
- B.** Implementing procedures:
1. The licensee shall develop and maintain written procedures that document how the requirements of this Article and the security plan will be met.
 2. The implementing procedures and revisions to these procedures shall be approved in writing by the individual with overall responsibility for the security program.
 3. The licensee shall retain a copy of the current procedure as a record for 3 years after the procedure is no longer needed. Superseded portions of the procedure shall be retained for 3 years after the record is superseded.
- C.** Training:
1. Each licensee shall conduct training to ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. The training shall include instruction in:
 - a. The licensee's security program and procedures to secure category 1 or category 2 quantities of radioactive material, and in the purposes and functions of the security measures employed;
 - b. The responsibility to report promptly to the licensee any condition that causes or may cause a violation of Department requirements;
 - c. The responsibility of the licensee to report promptly to the local law enforcement agency and licensee any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material; and

- d. The appropriate response to security alarms.
2. In determining those individuals who shall be trained on the security program, the licensee shall consider each individual's assigned activities during authorized use and response to potential situations involving actual or attempted theft, diversion, or sabotage of category 1 or category 2 quantities of radioactive material. The extent of the training shall be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material.
3. Refresher training shall be provided at a frequency not to exceed 12 months and when significant changes have been made to the security program. This training shall include:
 - a. Review of the training requirements of subsection (c) and any changes made to the security program since the last training;
 - b. Reports on any relevant security issues, problems, and lessons learned;
 - c. Relevant results of Department inspections; and
 - d. Relevant results of the licensee's program review and testing and maintenance.
4. The licensee shall maintain records of the initial and refresher training for 3 years from the date of the training. The training records shall include dates of the training, topics covered, a list of licensee personnel in attendance, and related information.

D. Protection of information:

1. Licensees authorized to possess category 1 or category 2 quantities of radioactive material shall limit access to and unauthorized disclosure of their security plan, implementing procedures, and the list of individuals that have been approved for unescorted access.
2. Efforts to limit access shall include the development, implementation, and maintenance of written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures.
3. Before granting an individual access to the security plan or implementing procedures, licensees shall:
 - a. Evaluate an individual's need to know the security plan or implementing

- procedures; and
- b. If the individual has not been authorized for unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling, the licensee shall complete a background investigation to determine the individual's trustworthiness and reliability. A trustworthiness and reliability determination shall be conducted by the reviewing official and shall include the background investigation elements contained in R9-7-1925(A)(2) through (A)(7).
4. Licensees need not subject the following individuals to the background investigation elements for protection of information:
 - a. The categories of individuals listed in R9-7-1929(A); or
 - b. Security service provider employees, provided written verification that the employee has been determined to be trustworthy and reliable, by the required background investigation in R9-7-1925(A)(2) through (A)(7), has been provided by the security service provider.
 5. The licensee shall document the basis for concluding that an individual is trustworthy and reliable and should be granted access to the security plan or implementing procedures.
 6. Licensees shall maintain a list of persons currently approved for access to the security plan or implementing procedures. When a licensee determines that a person no longer needs access to the security plan or implementing procedures or no longer meets the access authorization requirements for access to the information, the licensee shall remove the person from the approved list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to obtain the security plan or implementing procedures.
 7. When not in use, the licensee shall store its security plan and implementing procedures in a manner to prevent unauthorized access. Information stored in non-removable electronic form shall be password protected.
 8. The licensee shall retain as a record for 3 years after the document is no longer needed:
 - a. A copy of the information protection procedures; and

- b. The list of individuals approved for access to the security plan or implementing procedures.
- 9. State officials, State employees, and other individuals, whether or not licensees of the Commission or an Agreement State, who receive schedule information of the kind specified in subsection (D)(1) shall protect that information against unauthorized disclosure as specified in subsection (D)(2).

R9-7-1975. Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material

- A. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 1 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall:
 - 1. Preplan and coordinate shipment arrival and departure times with the receiving licensee;
 - 2. Preplan and coordinate shipment information with the governor or the governor's designee of any State through which the shipment will pass to:
 - a. Discuss the State's intention to provide law enforcement escorts; and
 - b. Identify safe havens; and
 - 3. Document the preplanning and coordination activities.
- B. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 2 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall coordinate the shipment no-later-than arrival time and the expected shipment arrival with the receiving licensee. The licensee shall document the coordination activities.
- C. Each licensee who receives a shipment of a category 2 quantity of radioactive material shall confirm receipt of the shipment with the originator. If the shipment has not arrived by the no-later-than arrival time, the receiving licensee shall notify the originator.
- D. Each licensee, who transports or plans to transport a shipment of a category 2 quantity of radioactive material, and determines that the shipment will arrive after the no-later-than arrival time provided pursuant to ~~paragraph~~ subsection (B), shall promptly notify the receiving licensee of the new no-later-than arrival time.
- E. The licensee shall retain a copy of the documentation for preplanning and coordination and any revision thereof, as a record for 3 years.

R9-7-1977. Advance Notification of Shipment of Category 1 Quantities of Radioactive

Material

~~As specified in subsections (A) and (B), each~~ Each licensee shall provide advance notification to the Department and the governor of a State, or the governor's designee, of the shipment of licensed material in a category 1 quantity, through or across the boundary of the State, before the transport, or delivery to a carrier for transport of the licensed material outside the confines of the licensee's facility or other place of use or storage.

1. Procedures for submitting advance notification:
 - a. The notification shall be made to the Department and to the office of each appropriate governor or governor's designee. The contact information, including telephone and mailing addresses, of governors and governors' designees, ~~and participating Tribes~~ is available on the NRC's website at <http://nrc-stp.ornl.gov/special/designee.pdf> <https://scp.nrc.gov/special/designee.pdf>. A list of the contact information is also available upon request from the Director, Division of Material Safety, State, Tribal, and Rulemaking Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Notifications to the Department shall be to the Department Director or their designee. The notification to the Department may be made by email to ram@azdhs.gov or by fax to (602) 437-0705.
 - b. A notification delivered by mail shall be postmarked at least 7 days before transport of the shipment commences at the shipping facility.
 - c. A notification delivered by any means other than mail shall reach the Department at least 4 days before the transport of the shipment commences and shall reach the office of the governor or the governor's designee at least 4 days before transport of a shipment within or through the State.
2. Information to be furnished in advance notification of shipment:

Each advance notification of shipment of category 1 quantities of radioactive material shall contain the following information, if available at the time of notification:

 - a. The name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;

- b. The license numbers of the shipper and receiver;
 - c. A description of the radioactive material contained in the shipment, including the radionuclides and quantity;
 - d. The point of origin of the shipment and the estimated time and date that shipment will commence;
 - e. The estimated time and date that the shipment is expected to enter each State along the route;
 - f. The estimated time and date of arrival of the shipment at the destination; and
 - g. A point of contact, with a telephone number, for current shipment information.
3. Revision notice:
- a. The licensee shall provide any information not previously available at the time of the initial notification, as soon as the information becomes available but not later than commencement of the shipment, to the governor of the State or the governor's designee and to the Department Director at the contact information available in R9-7-1907.
 - b. A licensee shall promptly notify the governor of the state or the governor's designee of any changes to the information provided in accordance with subsections (B) and (C)(1). The licensee shall also immediately notify the Department Director at the contact information available in R9-7-1907 of any such changes.
4. Cancellation notice:
- Each licensee who cancels a shipment for which advance notification has been sent shall send a cancellation notice to the governor of each State or to the governor's designee previously notified and to the Department Director at the contact information available in R9-7-1907. The licensee shall send the cancellation notice before the shipment would have commenced or as soon thereafter as possible. The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being cancelled.
5. Records:
- The licensee shall retain a copy of the advance notification and any revision and cancellation notices as a record for 3 years.

6. Protection of information:
State officials, State employees, and other individuals, whether or not licensees of the Department, the NRC, or an Agreement State, who receive schedule information of the kind specified ~~R9-7-1977(B)~~ in this Section shall protect that information against unauthorized disclosure as specified in R9-7-1943(D) of this Article.

R9-7-19101. Form of Records

- A.** Each record required by this Article shall be legible throughout the retention period specified by each Department rule. The record may be the original or a reproduced copy or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications, shall include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.
- B.** The licensee who transferred the material shall retain each record of the transfer of source or byproduct material until the Department terminates each license that authorizes the activity that is subject to the recordkeeping requirement.



Replacement Check List

For rules filed within the
1st Quarter
January 1 - March 31, 2016

THE ARIZONA ADMINISTRATIVE CODE

Within the stated calendar quarter, this Chapter contains all rules made, amended, repealed, renumbered, and recodified; or rules that have expired or were terminated due to an agency being eliminated under sunset law. These rules were either certified by the Governor's Regulatory Review Council or the Attorney General's Office; or exempt from the rulemaking process, and filed with the Office of the Secretary of State. Refer to the historical notes for more information. Please note that some rules you are about to remove may still be in effect after the publication date of this Supplement. Therefore, all superseded material should be retained in a separate binder and archived for future reference.

Title 12. Natural Resources

Chapter 1. Radiation Regulatory Agency

Supplement Release Quarter: 16-1

Sections, Parts, Exhibits, Tables or Appendices modified

R12-1-102, R12-1-303, R12-1-306, R12-1-308, R12-1-311, R12-1-313, R12-1-320, R12-1-323, R12-1-418, R12-1-452, R12-1-503, R12-1-703, R12-1-1302, R12-1-1512, R12-1-1901 through R12-1-1999, R12-1-19100 through R12-1-19109, Appendix A, Table 1

REMOVE Supp. 15-1
Pages: 1 - 254

REPLACE with Supp. 16-1
Pages: 1 - 275

The agency's contact person who can answer questions about rules in Supp. 16-1:

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Disclaimer: Please be advised the person listed is the contact of record as submitted in the rulemaking package for this supplement. The contact and other information may have changed and is provided as a public courtesy.

PUBLISHER
Arizona Department of State
Office of the Secretary of State, Public Services Division

PREFACE

Under Arizona law, the Department of State, Office of the Secretary of State (Office), accepts state agency rule filings and is the publisher of Arizona rules. The Office of the Secretary of State does not interpret or enforce rules in the Administrative Code. Questions about rules should be directed to the state agency responsible for the promulgation of the rule.

Scott Cancelosi, Director
PUBLIC SERVICES DIVISION
March 31, 2016

RULES

A.R.S. § 41-1001(17) states: “‘Rule’ means an agency statement of general applicability that implements, interprets, or prescribes law or policy, or describes the procedures or practice requirements of an agency.”

THE ADMINISTRATIVE CODE

The Arizona Administrative Code is where the official rules of the state of Arizona are published. The Code is the official codification of rules that govern state agencies, boards, and commissions. Virtually everything in your life is affected in some way by rules published in the Arizona Administrative Code, from the quality of air you breathe to the licensing of your dentist. This chapter is one of more than 230 in the Code compiled in 21 Titles.

ADMINISTRATIVE CODE SUPPLEMENTS

Rules filed by an agency to be published in the Administrative Code are updated quarterly. Supplement release dates are printed on the footers of each chapter:

First Quarter: January 1 - March 31
Second Quarter: April 1 - June 30
Third Quarter: July 1 - September 30
Fourth Quarter: October 1 - December 31

For example, the first supplement for the first quarter of 2016 is cited as Supp. 16-1.

HOW TO USE THE CODE

Rules may be in effect before a supplement is released by the Office. Therefore, the user should refer to issues of the Arizona Administrative Register for recent updates to rule Sections.

ARTICLES AND SECTIONS

Rules in chapters are divided into Articles, then Sections. The “R” stands for “rule” with a sequential numbering and lettering system separated into subsections.

HISTORICAL NOTES AND EFFECTIVE DATES

Historical notes inform the user when the last time a Section was updated in the Administrative Code. Be aware, since the Office publishes each quarter by entire chapters, not all Sections are updated by an agency in a supplement release. Many times just one Section or a few Sections may be updated in the entire chapter.

ARIZONA REVISED STATUTE REFERENCES

The Arizona Revised Statutes (A.R.S.) are available online at the Legislature’s website, www.azleg.gov. An agency’s authority note to make rules are often included at the beginning of a chapter. Other Arizona statutes may be referenced in rule under the A.R.S. acronym.

SESSION LAW REFERENCES

Arizona Session Law references in the introduction of a chapter can be found at the Secretary of State’s website, www.azsos.gov/services/legislative-filings.

EXEMPTIONS FROM THE APA

It is not uncommon for an agency to be exempt to the steps outlined in the rulemaking process as specified in the Arizona Administrative Procedures Act, also known as the APA (Arizona Revised Statutes, Title 41, chapter 6, Articles 1 through 10). Other agencies may be given an exemption to certain provisions of the Act.

An agency’s exemption is written in law from the Arizona State Legislature or under a referendum or initiative passed into law by Arizona voters.

When an agency files an exempt rulemaking package with our Office it specifies the law exemption in what is called the preamble of rulemaking. The preamble is published in the Arizona Administrative Register online at www.azsos.gov/rules, click on the Administrative Register link.

In the Administrative Code the Office includes editor’s notes at the beginning of a chapter indicating that certain rulemaking Sections were made by exempt rulemaking. Exempt rulemaking notes are also included in the historical note at the end of a rulemaking Section.

The Office makes a distinction to certain exemptions because some rules are made without receiving input from stakeholders or the public. Other exemptions may require an agency to propose exempt rules at a public hearing.

EXEMPTIONS AND PAPER COLOR

If you are researching rules and come across rescinded chapters on a different paper color, it is because the agency filed a Notice of Exempt Rulemaking. At one time the office published exempt rules on either blue or green paper. Blue meant the authority of the exemption was given by the Legislature; green meant the authority was determined by a court order. In 2001 the Office discontinued publishing rules using these paper colors.

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Public Services managing rules editor, Rhonda Paschal, assisted with the editing of this chapter.

TITLE 12. NATURAL RESOURCES

CHAPTER 1. RADIATION REGULATORY AGENCY

Authority: A.R.S. § 30-651 et seq.

Editor's Note: This Chapter has rules in Supp. 16-1 that were filed in the Office on February 3, 2016, with an immediate effective date of February 2, 2016, the date approved by the Governor's Regulatory Review Council, in order to remain in federal compliance with Agreement State status as stipulated in A.R.S. § 41-1032(A)(2).

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ARTICLE 1. GENERAL PROVISIONS**R12-1-101. Scope and Incorporated Materials**

- A. Except as otherwise specifically provided, this Chapter applies to all persons who receive, possess, use, transfer, own, or acquire any source of radiation.
- B. This Chapter does not apply to any person that is subject to regulation by the Nuclear Regulatory Commission.
- C. State control of source material, byproduct material, and special nuclear material in quantities not sufficient to form a critical mass is subject to the provisions of the agreement between the state and the U.S. Nuclear Regulatory Commission, signed March 30, 1967 and incorporated by reference. This incorporated material contains no later editions or amendments, and together with all other incorporated materials in this Chapter, is available for inspection or copying at the Arizona Radiation Regulatory Agency, 4814 S. 40th St., Phoenix, AZ 85040.
- D. Federal regulations incorporated by reference in this Chapter are available from the U.S. Government Printing Office, P.O. Box 979050, St. Louis, MO 63197-9000 and <http://www.gpo-access.gov/cfr/>.

Historical Note

Former Rule Section A.1; Former Section R12-1-101 repealed, new Section R12-1-101 adopted effective June 30, 1977 (Supp. 77-3). Amended effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-102. Definitions

Terms defined in A.R.S. § 30-651 have the same meanings when used in this Chapter, unless the context otherwise requires. Additional subject-specific definitions are used in other Articles.

“A1” means the maximum activity of special form radioactive material permitted in a type A package. These values are either listed in 10 CFR 71, Appendix A, Table A-1, or may be derived in accordance with the procedures prescribed in 10 CFR 71, Appendix A, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“A2” means the maximum activity of radioactive material, other than special form radioactive material, low specific activity (LSA) material, and surface contaminated object (SCO) material, permitted in a Type A package. These values are either listed in 10 CFR 71, Appendix A, Table A-1, or may be derived in accordance with the procedure prescribed in 10 CFR 71, Appendix A, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Absorbed dose” means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the gray (Gy) and the rad.

“Accelerator” means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV. For purposes of this definition, “particle accelerator” is an equivalent term.

“Accelerator produced material” means any material made radioactive by irradiating it in a particle accelerator.

“Act” means A.R.S. Title 30, Chapter 4.

“Activity” means the rate of disintegration, transformation, or decay of radioactive material. The units of activity are the becquerel (Bq) and the curie (Ci).

“Adult” means an individual 18 or more years of age.

“Agency,” or “ARRA” means the Arizona Radiation Regulatory Agency.

“Agreement State” means any state with which the United States Nuclear Regulatory Commission has entered into an effective agreement under Section 274(b) of the Atomic Energy Act of 1954, as amended (73 Stat. 689). “Nonagreement State” means any other state.

“Airborne radioactive material” means any radioactive material dispersed in the air in the form of aerosols, dusts, fumes, mists, vapors, or gases.

“Airborne radioactivity area” means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed radioactive material, exist in concentrations:

In excess of the derived air concentrations (DACs) specified in Appendix B, Table I of Article 4 of these rules; or

That an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.

“ALARA” means as low as is reasonably achievable, making every reasonable effort to maintain exposures to radiation as far below the dose limits in these rules as is practical, consistent with the purpose for which the licensed or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed or registered sources of radiation in the public interest.

“Analytical x-ray equipment” means equipment used for x-ray diffraction or x-ray-induced fluorescence analysis.

“Analytical x-ray system” means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials.

“Annual” means done or performed yearly. For purposes of Chapter 1 any required activity done or performed within plus or minus two weeks of the annual due date is considered done or performed in a timely manner.

“Authorized medical physicist” means an individual who meets the requirements in R12-1-711; or is identified as an authorized medical physicist or teletherapy physicist on:

A specific medical use license issued by the Agency, NRC, or another Agreement State;

A medical use permit issued by a NRC master material licensee;

A permit issued by an Agency, NRC, or another Agreement State broad scope medical use licensee; or

A permit issued by a NRC master material license broad scope medical use permittee.

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“Authorized nuclear pharmacist” means a pharmacist who meets the requirements in R12-1-712; or is identified as an authorized nuclear pharmacist on:

A specific license issued by an Agency, NRC, or another Agreement State that authorizes medical use or the practice of nuclear pharmacy;

A permit issued by a NRC master material licensee that authorizes medical use or the practice of nuclear pharmacy;

A permit issued by an Agency, NRC, or another Agreement State broad scope medical use licensee that authorizes medical use or the practice of nuclear pharmacy; or

A permit issued by a NRC master material license broad scope medical use permittee that authorizes medical use or the practice of nuclear pharmacy; or

Is identified as an authorized nuclear pharmacist by a commercial nuclear pharmacy that has been authorized to identify authorized nuclear pharmacists; or

Is designated as an authorized nuclear pharmacist in accordance with R12-1-311(G).

“Authorized user” means a physician, dentist, or podiatrist who meets the requirements in R12-1-719, R12-1-723, R12-1-727, R12-1-728, or R12-1-744; or is identified as an authorized user on:

An Agency, NRC, or another Agreement State license that authorizes the medical use of radioactive material;

A permit issued by a NRC master material licensee that is authorized to permit the medical use of radioactive material;

A permit issued by an Agency, NRC, or another Agreement State specific licensee of broad scope that is authorized to permit the medical use of radioactive material; or A permit issued by a NRC master material license broad scope permittee that is authorized to permit the medical use of radioactive material.

“Background radiation” means radiation from cosmic sources; not technologically enhanced naturally occurring radioactive material, including radon (except as a decay product of source or special nuclear material); and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents, such as Chernobyl, that contribute to background radiation and are not under the control of a licensee. “Background radiation” does not include sources of radiation regulated by the Agency.

“Becquerel” (Bq) means the International System (SI) unit for activity and is equal to 1 disintegration per second (dps or tps).

“Bioassay” means the determination of kinds, quantities, or concentrations, and in some cases, the locations of radioactive material in the human body, whether by direct measurement, in vivo counting, or by analysis and evaluation of materials excreted or removed from the human body. For purposes of these rules, “radiobioassay” is an equivalent term.

“Brachytherapy” means a method of radiation therapy in which an encapsulated source or group of sources is utilized to deliver beta or gamma radiation at a distance of up to a few centimeters, by surface, intracavitary or interstitial application.

“Byproduct material” means:

Any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium or thorium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute “byproduct material” within this definition;

Any discrete source of radium-226 that is produced, extracted, or converted after extraction, for use for a commercial, medical, or research activity; or any material that, has been made radioactive by use of a particle accelerator; and is produced, extracted, or converted after extraction, for use for a commercial, medical, or research activity; and

Any discrete source of naturally occurring radioactive material, other than source material, that the NRC, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security and; before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

“Calendar quarter” means not less than 12 consecutive weeks nor more than 14 consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged such that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. A licensee or registrant shall not change the method of determining calendar quarters for purposes of this Chapter except at the beginning of a calendar year.

“Calibration” means the determination of:

The response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or

The strength of a source of radiation relative to a standard.

“Carrier” means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

“Certifiable cabinet x-ray system” means an existing uncertified x-ray system that meets or has been modified to meet the certification requirements specified in 21 CFR 1020.40, revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Certificate holder” means a person who has been issued a certificate of compliance or other package approval by the Agency or NRC.

“Certificate of Compliance” (CoC) means the certificate issued by the NRC under 10 CFR 71, Subpart D, (Revised Jan-

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uary 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), which authorizes the design of a package for the transportation of radioactive material.

“Certified cabinet x-ray system” means an x-ray system that has been certified in accordance with 21 CFR 1010.2, as being manufactured and assembled on or after April 10, 1975, in accordance with the provisions of 21 CFR 1020.40, both sections revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“CFR” means Code of Federal Regulations.

“Chelating agent” means amine polycarboxylic acids, hydroxycarboxylic acids, gluconic acid, and polycarboxylic acids.

“Civil penalty” means the monetary fine which may be imposed on licensees by the Agency, pursuant to A.R.S. § 30-687, for violations of the Act, this Chapter, or license conditions.

“Collective dose” means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

“Committed dose equivalent” (HT,50) means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

“Committed effective dose equivalent” (HE,50) is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($HE,50 = S wT,HT,50$).

“Consortium” means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution or a federal facility or a medical facility.

“Curie” means a unit of quantity of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of $3.7E + 10^{10}$ transformations per second (tps).

“Current license or registration” means a license or registration issued by the Agency and for which the licensee has paid the license or registration fee for the current year according to R12-1-1304.

“Deep-dose equivalent” (Hd), which applies to external whole body exposure, is the dose equivalent at a tissue depth of 1 centimeter (1000 mg/cm²).

“Depleted uranium” means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

“Discrete source” means a radionuclide that has been processed so that its concentration within a material has been pur-

posely increased for use for commercial, medical, or research activities.

“Dose” is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these rules, “radiation dose” is an equivalent term.

“Dose equivalent” (HT) means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the sievert (Sv) and rem.

“Dose limits” means the permissible upper bound of radiation doses established in accordance with these rules. For purposes of these rules, “limits” is an equivalent term.

“Dosimeter” (See “Individual monitoring device”)

“Effective dose equivalent” (HE) means the sum of the products of the dose equivalent to each organ or tissue (HT) and the weighting factor (wT) applicable to each of the body organs or tissues that are irradiated ($HE = S wTHT$).

“Effluent release” means any disposal or release of radioactive material into the ambient atmosphere, soil, or any surface or subsurface body of water.

“Embryo/fetus” means the developing human organism from conception until the time of birth.

“Enclosed beam x-ray system” means an analytical x-ray system constructed in such a way that access to the interior of the enclosure housing the x-ray source during operation is precluded except through bypassing of interlocks or other safety devices to perform maintenance or servicing.

“Enclosed radiography” means industrial radiography conducted by using cabinet radiography or shielded room radiography.

“Cabinet radiography” means industrial radiography conducted by using an x-ray machine in an enclosure not designed for human admittance and which is so shielded that every location on the exterior meets the conditions for an “unrestricted area.”

“Shielded room radiography” means industrial radiography conducted using an x-ray machine in an enclosure designed for human admittance and which is so shielded that every location of the exterior meets the conditions for an “unrestricted area.”

“Entrance or access point” means any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

“Exhibit” for purposes of these rules, is equivalent in meaning to the word “Schedule” as found in previously issued rules, current license conditions, and regulation guide.

“Explosive material” means any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

“Exposure” means:

Being subjected to ionizing radiation or radioactive materials.

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The quotient of dQ by dm where “dQ” is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass “dm” are completely stopped in air. The special unit of exposure is the roentgen (R).

“Exposure rate” means the exposure per unit of time.

“External dose” means that portion of the dose equivalent received from any source of radiation outside the body.

“Extremity” means the shoulder girdle to the phalanges and the lower two-thirds of the femur to the phalanges.

“Fail-safe characteristics” means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

“FDA” means the United States Food and Drug Administration.

“Field radiography” means industrial radiography, utilizing a portable or mobile x-ray system, which is not conducted in a shielded enclosure.

“Field station” means a facility where radioactive sources may be stored or used and from which equipment is dispatched to temporary job sites.

“Former U.S. Atomic Energy Commission (AEC) or U.S. Nuclear Regulatory Commission (NRC) licensed facilities” means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or critical mass experimental facilities where AEC or NRC licenses have been terminated.

“Generally applicable environmental radiation standards” means standards issued by the U.S. Environmental Protection Agency (EPA), 40 CFR 190 and 191, revised July 1, 2013, incorporated by reference, and available under R12-1-101, under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material. This incorporated material contains no future editions or amendments.

“Gray” (Gy) means the International System (SI) unit of absorbed dose and is equal to 1 joule per kilogram. One gray equals 100 rad.

“Hazardous waste” means those wastes designated as hazardous in A.R.S. § 49-921(5).

“Healing arts” means the practice of medicine, dentistry, osteopathy, podiatry, chiropractic, and veterinary medicine.

“Health care institution” means every place, institution, or building which provides facilities for medical services or other health-related services, not including private clinics or offices which do not provide overnight patient care.

“High radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 1 mSv (0.1 rem) in one hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

“Human use” means the internal or external administration of radiation or radioactive materials to human beings.

“Impound” means to abate a radiological hazard. Actions which may be taken by the Agency in impounding a source of radiation include seizing the source of radiation, controlling access to an area, and preventing a radiation machine from being utilized.

“Indian tribe” means an Indian or Alaska native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a.

“Individual” means any human being.

“Individual monitoring” means the assessment of:

Dose equivalent

By the use of individual monitoring devices, or
By the use of survey data, or

Committed effective dose equivalent

By bioassay; or

By determination of the time-weighted air concentrations to which an individual has been exposed, that is, DAC-hours. (See the definition of DAC-hours in Article 4).

“Individual monitoring device” means a device designed to be worn by a single individual for the assessment of dose equivalent. For purposes of this Chapter, “dosimeter” and “personnel dosimeter,” are equivalent terms. Examples of individual monitoring devices are film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, optical stimulation devices, and personal (“lapel”) air sampling devices.

“Individual monitoring equipment” means one or more individual monitoring devices. For purposes of this Chapter, “personnel monitoring equipment” is an equivalent term.

“Industrial radiography” means the examination of the macroscopic structure of materials by non-destructive methods utilizing sources of ionizing radiation.

“Injection tool” means a device used for controlled subsurface injection of radioactive tracer material.

“Inspection” means an examination or observation by a representative of the Agency, including but not limited to tests, surveys, and monitoring to determine compliance with rules, orders, requirements and conditions of the License or certificate of registration.

“Interlock” means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

“Internal dose” means that portion of the dose equivalent received from radioactive material taken into the body.

“Irradiate” means to expose to radiation.

“Laser” (light amplification by the stimulated emission of radiation) means any device which can produce or amplify electromagnetic radiation with wave lengths in the range of 180 nanometers to 1 millimeter primarily by the process of controlled stimulated emission.

“Lens dose equivalent” (LDE) means the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeters (300 mg/cm²).

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“License” means the grant of authority, issued pursuant to Articles 3 and 14 of this Chapter and A.R.S. §§ 30-671, 30-672, and 30-721 et seq., to acquire, possess, transfer, and use sources of radiation. The types of licenses issued by the Agency are described in R12-1-1302.

“Licensed material” means radioactive material received, possessed, used, transferred, or disposed of under a general or specific license issued by the Agency.

“Licensed practitioner” means a person licensed or otherwise authorized by law to practice medicine, dentistry, osteopathy, chiropractic, podiatry, or naturopathy in this state.

“Licensee” means any person who is licensed by the Agency under this Chapter to acquire, possess, transfer, or use sources of radiation.

“Licensing State” means any state having regulations equivalent to this Chapter relating to, and an effective program for the regulation of, naturally occurring and accelerator-produced radioactive material (NARM).

“Limits” (See “Dose limits”)

“Local components” means those parts of an analytical x-ray system that are struck by x-rays, including radiation source housings, port and shutter assemblies, collimator, sample holders, cameras, goniometer, detectors and shielding but not including power supplies, transformers, amplifiers, readout devices, and control panels.

“Logging supervisor” means the individual who provides personal supervision of the utilization of sources of radiation at the well site.

“Logging tool” means a device used subsurface to perform well logging.

“Lost or missing licensed or registered source of radiation” means licensed or registered source of radiation the location of which is unknown. Included are licensed radioactive material or a registered radiation source that has been shipped but has not reached its planned destination and whose location cannot be readily traced or ascertained in the transportation system.

“Low-level waste” means waste material which contains radioactive nuclides in concentrations or quantities which exceed applicable standards for unrestricted release but does not include:

High-level waste, such as irradiated reactor fuel, liquid waste from reprocessing irradiated reactor fuel, or solids into which any such liquid waste has been converted;

Waste material containing transuranic elements with contamination levels greater than 10 nanocuries per gram (370 kilobecquerels per kilogram) of waste material;

The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

“Major processor” means a user processing, handling, or manufacturing radioactive material exceeding Type A quantities as unsealed sources or material or exceeding four times Type B quantities as sealed sources but does not include nuclear medicine programs, universities, industrial radiographers, or small industrial programs. Type A and B quantities are defined in 10 CFR 71.4, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Medical dose” means a radiation dose intentionally delivered to an individual for medical examination, diagnosis, or treatment.

“Member of the public” means any individual except when that individual is receiving an occupational dose.

“MeV” means Mega Electron Volt which equals 1 million volts (106 eV).

“Mineral logging” means any well logging performed in a borehole drilled for the purpose of exploration for minerals other than oil or gas.

“Minor” means an individual less than 18 years of age.

“Monitoring” means the measurement of radiation, radioactive material concentrations, surface area activities, or quantities of radioactive material, and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these rules, “radiation monitoring” and “radiation protection monitoring” are equivalent terms.

“Multiplier” means a letter representing a number. The use of a multiplier is based on the code given below:

<i>Prefix</i>	<i>Multiplier Symbol</i>	<i>Value</i>
eka	E	10 ¹⁸
peta	P	10 ¹⁵
tera	T	10 ¹²
giga	G	10 ⁹
mega	M	10 ⁶
kilo	k	10 ³
milli	m	10 ⁻³
micro	u	10 ⁻⁶
nano	n	10 ⁻⁹
pico	p	10 ⁻¹²
femto	f	10 ⁻¹⁵
atto	a	10 ⁻¹⁸

“NARM” means any naturally occurring or accelerator-produced radioactive material. It does not include byproduct, source, or special nuclear material. This term should not be confused with “NORM” which is defined as naturally occurring radioactive material.

“Normal operating procedures” means the entire set of instructions necessary to accomplish the intended use of the source of radiation. These procedures shall include, but are not limited to, sample insertion and manipulation, equipment alignment, routine maintenance by the licensee, and data recording procedures which are related to radiation safety.

“Natural radioactivity” means the radioactivity of naturally occurring radioactive substances.

“NRC” means Nuclear Regulatory Commission, the U.S. Nuclear Regulatory Commission, or its duly authorized representatives.

“Nuclear waste” means any highway route controlled quantity (defined in 49 CFR 173.403, revised October 1, 2012, incorporated by reference, and available under R12-1-101; this incorporated material contains no future editions or amendments) of source, byproduct, or special nuclear material required to be in NRC-approved packaging while transported to, through, or across state boundaries to a disposal site, or to a collection

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point for transport to a disposal site. Additional requirements associated with transportation of radioactive material can be found in Article 15.

“Occupational dose” means the dose received by an individual in the course of employment in which the individual’s assigned duties involve exposure to sources of radiation, whether in the possession of a licensee, registrant, or other person. Occupational dose does not include a dose received from background radiation, medical administration of radiation to the individual, exposure to an individual who has been administered radioactive material and released in accordance with R12-1-717, voluntary participation in a medical research program, or as a member of the public.

“Open beam system” means an analytical x-ray system in which an individual could place some body part in the primary beam path during normal operation.

“Package” means the packaging together with its radioactive contents as presented for transport.

“Particle accelerator” (See “Accelerator”)

“Permanent radiographic installation” means a fixed, shielded installation or structure designed or intended for industrial radiography and in which industrial radiography is regularly performed.

“Personnel dosimeter” (See “Individual monitoring device”)

“Personnel monitoring equipment” (See “Individual monitoring device”)

“Personal supervision” means supervision in which the supervising individual is physically present at the site where sources of radiation and associated equipment are being used, watching the performance of the supervised individual and in such proximity that immediate assistance can be given if required.

“PET” (See Positron Emission Tomography (PET))

“Pharmacist” means an individual licensed by this state to compound and dispense drugs, prescriptions, and poisons.

“Physician” means an individual licensed pursuant to A.R.S. Title 32, Chapters 13 or 17.

“Positron Emission Tomography (PET)” means an imaging technique using radionuclides to produce high resolution images of the body’s biological functions.

“Positron Emission Tomography radionuclide production facility” means a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.

“Preceptor” means an individual who provides, directs, or verifies training and experience required for an individual to become an authorized user, an authorized medical physicist, an authorized nuclear pharmacist, or a Radiation Safety Officer.

“Primary beam” means radiation which passes through an aperture of the source housing by a direct path from the x-ray tube or a radioactive source located in the radiation source housing.

“Public dose” means the dose received by a member of the public from radiation from radioactive material released by a licensee or registrant, or exposure to a source of radiation used in a licensed or registered operation. It does not include an occupational dose or a dose received from background radiation, medical administration of radiation to the individual, exposure to an individual who has been administered radioac-

tive material and released in accordance with R12-1-717, or voluntary participation in a medical research program.

“Pyrophoric liquid” means any liquid that ignites spontaneously in dry or moist air at or below 130× F (54.4× C).

“Pyrophoric solid” means any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and, when ignited, burns so vigorously and persistently that it creates a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

“Qualified expert” means an individual certified in the appropriate field by the American Board of Radiology or the American Board of Health Physics, or having equivalent qualifications that provide the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs; or an individual certified in Therapeutic Radiological Physics or X-ray and Radium Physics by the American Board of Radiology, or having equivalent qualifications that provide training and experience in the clinical applications of radiation physics to radiation therapy, to calibrate radiation therapy equipment. The detailed requirements for a particular qualified expert may be provided in the respective Articles of this Chapter. For clarification purposes, a qualified expert is not always an authorized medical physicist; however, an authorized medical physicist is included within the definition of “qualified expert.”

“Quality Factor” (Q) means the modifying factor, listed in Tables I and II of this Article, that is used to derive dose equivalent from absorbed dose.

“Quarter” (See “Calendar quarter”)

“Rad” means the special unit of absorbed dose. One rad equals 100 ergs per gram, or 0.01 gray.

“Radiation” means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of these rules, this term is synonymous with ionizing radiation. Equivalent terminology for non-ionizing radiation is defined in Article 14.

“Radiation area” means any area accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.05 mSv (0.005 rem) in one hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

“Radiation dose” (See “Dose”)

“Radiation machine” means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.

“Radiation Safety Officer” (RSO) means the individual and who for license conditions:

Meets the requirements in 10 CFR 35.50(a) or (c)(1) and 10 CFR 35.59, (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or is identified as a Radiation Safety Officer on a specific medical use license issued by the NRC or an Agreement State; or a medical use permit issued by a NRC master material licensee;

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Or, who, for registration conditions, is designated by the registrant as the individual who has the knowledge, authority, and responsibility to apply appropriate radiation protection principles to ensure radiation safety and compliance with the Act, this Chapter and any registration conditions.

“Radiation Safety Officer” (RSO) means the individual and who for license conditions:

Meets the requirements of R12-1-407, and for a medical license meets the training requirements of R12-1-710 or is identified as a Radiation Safety Officer on a specific medical use license issued by the Agency, NRC, or another Agreement State; or a medical use permit issued by a NRC master material licensee;

Or, who meets the requirements in R12-1-512 on a specific industrial license issued by the Agency, NRC, or another Agreement State; or an industrial use permit issued by a NRC master material licensee;

Or, who, for registration conditions, is designated by the registrant as the individual who has the knowledge, authority, and responsibility to apply appropriate radiation protection principles to ensure radiation safety and compliance with the Act, this Chapter and any registration conditions.

“Radioactive marker” means radioactive material placed subsurface or on a structure intended for subsurface use for the purpose of depth determination or direction orientation.

“Radioactive material” means any solid, liquid, or gas which emits radiation spontaneously.

“Radioactivity” means emission of electromagnetic energy or particles or both during the transformation of unstable atomic nuclei.

“Radiographer” means any individual who performs or personally supervises industrial radiographic operations and who is responsible to the licensee or registrant for assuring compliance with the requirements of this Chapter and all conditions of the license or certificate of registration.

“Radiographer’s assistant” means any individual who, under the personal supervision of a radiographer, uses sources of radiation, radiographic exposure devices, related handling tools, or survey instruments in industrial radiography.

“Registrant” means any person who is registered with the Agency and is legally obligated to register with the Agency pursuant to these rules and the Act.

“Registration” is the process by which a person becomes a registrant pursuant to Article 2 or 14 of this Chapter. With the exception of registration of persons who install or service radiation machines, the types of registrations issued by the Agency are described in R12-1-1302.

“Regulations of the U.S. Department of Transportation” means the federal regulations in 49 CFR 107, 171 through 180, revised October 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Rem” means the special unit of dose equivalent (see “Dose equivalent”). The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem = 0.01 sievert).

“Research and Development” means exploration, experimentation, or the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes. Research and Development does not include the internal or external administration of radiation or radioactive material to human beings.

“Restricted area” means any area where the licensee or registrant controls access for purposes of protecting individuals from exposure to radiation and radioactive material. A restricted area does not include any areas used for residential quarters, although a room or separate rooms in a residential building may be set apart as a restricted area.

“Roentgen” (R) means the special unit of exposure and is equal to the quantity of x or gamma radiation which causes ionization in air equal to 258 microcoulomb per kilogram (see “Exposure”).

“Safety system” means any device, program, or administrative control designed to ensure radiation safety.

“Sealed source” means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.

“Sealed Source and Device Registry” means the national registry that contains all the registration certificates, generated by both the NRC and the Agreement States, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for each source or device.

“Shallow dose equivalent” (HS), which applies to the external exposure of the skin of the whole body or the skin of an extremity, is taken as the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm²).

“Shielded position” means the location within a radiographic exposure device or storage container which, by manufacturer’s design, is the proper location for storage of the sealed source.

“Sievert” means the SI unit of dose equivalent (see “Dose equivalent”). The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor (1 Sv = 100 rem).

“Site boundary” means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee or registrant.

“Source changer” means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those also used for transporting and storage of sealed sources.

“Source holder” means a housing or assembly into which a radioactive source is placed for the purpose of facilitating the handling and use of the source in well-logging operations.

“Source material” means:

Uranium or thorium, or any combination of uranium or thorium, in any physical or chemical form; or

Ores that contain by weight 1/20 of 1 percent (0.05 percent) or more of uranium, thorium, or any combination of uranium and thorium.

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Source material does not include special nuclear material.

“Source material milling” means any activity that results in the production of byproduct material as defined by the second subsection under the definition of “Byproduct material.”

“Source of radiation” or “source” means any radioactive material or any device or equipment emitting, or capable of producing, radiation.

“Special form radioactive material” means radioactive material that satisfies all of the following conditions:

It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

The piece or capsule has at least one dimension not less than 5 millimeters (0.2 inch); and

It satisfies the test requirements specified in 10 CFR 71.75, revised January 1, 2013, incorporated by reference, available under R12-1-101. This incorporated material contains no future editions or amendments. A special form encapsulation designed in accordance with the U.S. Nuclear Regulatory Commission requirements in effect on June 30, 1983, and constructed prior to July 1, 1985, may continue to be used. A special form encapsulation constructed after June 30, 1985, shall meet requirements of this definition applicable at the time of its construction.

“Special nuclear material in quantities not sufficient to form a critical mass” means Uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; Uranium-233 in quantities not exceeding 200 grams; Plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: for each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed one. For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{XgmsU235}{350} + \frac{YgmsU233}{200} + \frac{ZgmsPu}{200} \leq 1$$

“Storage area” means any location, facility, or vehicle which is used to store, transport, or secure a radiographic exposure device, storage container, sealed source, or other source of radiation when it is not in use.

“Storage container” means a device in which sealed sources are transported or stored.

“Subsurface tracer study” means the release of a substance tagged with radioactive material for the purpose of tracing the movement or position of the tagged substance in the well-bore or adjacent formation.

“Survey” means an evaluation of the production, use, release, disposal, or presence of sources of radiation or any combination thereof under a specific set of conditions to determine actual or potential radiation hazards. Such evaluations include, but are not limited to, tests, physical examination and measurements of levels of radiation or concentration of radioactive material present.

“TEDE” (See “Total Effective Dose Equivalent”)

“Teletherapy” means therapeutic irradiation in which the source of radiation is at a distance from the body.

“Temporary job site” means any location where sources of radiation are used other than the specified locations listed on a license document. Storage of sources of radiation at a temporary jobsite shall not exceed six months unless the Agency has granted an amendment authorizing storage at that jobsite.

“Test” means the process of verifying compliance with an applicable rule, order, or license condition.

“These rules” means all Articles of 12 A.A.C. 1.

“Total Effective Dose Equivalent” (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

“Total Organ Dose Equivalent” (TODE) means the sum of the deep-dose equivalent and the committed dose equivalent to the organ receiving the highest dose. Determination of TODE is described in R12-1-411.

“Tribal official” means the highest ranking individual that represents Tribal leadership, such as the Chief, President, or Tribal Council leadership.

“Unrefined and unprocessed ore” means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining.

“Unrestricted area” means any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive material. Any area used for residential quarters is an unrestricted area.

“U.S. Department of Energy” means the Department of Energy established by P.L. 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the Department exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers, and components; and transferred to the U.S. Energy Research and Development Administration and to the administrator of that agency under sections 104(b), (c), and (d) of the Energy Reorganization Act of 1974 (P.L. 93-438, October 11, 1974, 88 Stat. 1233 at 1237, 42 U.S.C. 5814, effective January 19, 1975) and retransferred to the Secretary of Energy under Section 301(a) of the Department of Energy Organization Act (P.L. 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977).

“Very high radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose that exceeds 5 grays (500 rads) in one hour at one meter from a radiation source or one meter from any surface that the radiation penetrates.

“Waste” (See “Low-level waste”)

“Waste handling licensees” means persons licensed to receive and store radioactive wastes prior to disposal and persons licensed to dispose of radioactive waste.

“Week” means seven consecutive days starting on Sunday.

“Well-bore” means a drilled hole in which wireline service operations and subsurface tracer studies are performed.

“Well-logging” means the lowering and raising of measuring devices or tools which may contain sources of radiation into

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well-bores or cavities for the purpose of obtaining information about the well and adjacent formations.

“Whole body” means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knee.

“Wireline” means an armored cable containing one or more electrical conductors which is used to lower and raise logging tools in the well-bore.

“Wireline service operation” means any evaluation or mechanical service which is performed in the well-bore using devices on a wireline.

“Worker” means any individual engaged in work under a license or registration issued by the Agency and controlled by employment or contract with a licensee or registrant.

“WL” means working level, any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of $1.3E + 5$ MeV of potential alpha particle energy. The short-lived radon daughters are – for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

“WLM” means working level month, an exposure to one working level for 170 hours (2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month).

“Workload” means the degree of use of an x-ray or gamma-ray source per unit time.

“Year” means the period of time beginning in January used to determine compliance with the provisions of these rules. The licensee or registrant may change the starting date of the year used to determine compliance by the licensee or registrant provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

Historical Note

Former Rule Section A.2. Former Section R12-1-102 repealed, new Section R12-1-102 adopted effective June 30, 1977 (Supp. 77-3). Amended effective November 19, 1982 (Supp. 82-6). Amended effective February 25, 1985 (Supp. 85-1). Amended by adding a new paragraph (31), subparagraph (w) and renumbering the former paragraph (31), subparagraphs (w) through (z) accordingly effective November 28, 1986 (Supp. 86-6). Amended by adding a new paragraph (34) and renumbering the former paragraphs (34) through (68) accordingly effective June 26, 1987 (Supp. 87-2). Amended effective April 2, 1990 (Supp. 90-2). Amended effective November 5, 1993 (Supp. 93-4). Amended effective February 18, 1994 (Supp. 94-1). Amended effective August 10, 1994 (Supp. 94-3). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by

final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-103. Exemptions

- A. Common and contract carriers, freight forwarders, and warehousemen who are subject to 49 CFR 107.109, 107.111, 107.113, 171.2, 171.3, 172.200, 173.1, 173.3, 173.4, 173.401, 175.3, 175.10, 176.3, 176.5, 176.11, 176.24, 176.27, and 177.801, revised October 1, 2007, of the U.S. Department of Transportation, or 39 CFR 111.1 of the U.S. Postal Service, revised July 1, 2007, incorporated by reference, and available under R12-1-101, and who if need be, store radioactive material, for periods of less than 72 hours, in the regular course of their carriage for another, are exempt from this Chapter. The incorporated materials above contain no future editions or amendments.
- B. Any U.S. Department of Energy contractor or subcontractor and any U.S. Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within this state are exempt from this Chapter to the extent that such contractor or subcontractor under the contract receives, possesses, uses, transfers, or acquires sources of radiation:
1. Prime contractors performing work for the Department of Energy at U.S. Government-owned or controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;
 2. Prime contractors of the Department of Energy performing research or development, manufacture, storage, testing or transportation of nuclear weapons or components thereof;
 3. Prime contractors of the Department of Energy using or operating nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel; and
 4. Any other prime contractor or subcontractor of the Department of Energy or of the Nuclear Regulatory Commission when the state and the Nuclear Regulatory Commission jointly determine:
 - a. That the exemption of the prime contractor or subcontractor is authorized by law; and
 - b. That under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.
- C. Any licensee who delivers to a carrier for transport any package which contains radioactive material having a specific activity of 74 kBq/kg (2 nanocuries per gram) or less, is exempt from the provisions of this Chapter with respect to that package.

Historical Note

Former Rule Section A.3; Former Section R12-1-103 repealed, new Section R12-1-103 adopted effective June 30, 1977 (Supp. 77-3). Amended effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-104. Prohibited Uses

- A. A person shall not use the following fluoroscopic devices:
 1. Hand-held fluoroscopic screens,
 2. Shoe-fitting fluoroscopic devices.
- B. Except as specifically authorized by law, a person shall not use sources of ionizing radiation for the purpose of screening an individual or inspecting an individual for:
 1. Concealed weapons,
 2. Hazardous materials,
 3. Stolen property, or
 4. Contraband.
- C. Unless there is a medical or dental indication for the exposure and the exposure is prescribed by a licensed practitioner, a person shall not deliberately expose an individual to the useful beam from:
 1. An ionizing radiation machine; or
 2. A non-ionizing radiation source, having a radiation beam known to be harmful to human tissue.

Historical Note

Former Rule Section A.4; Former Section R12-1-104 repealed, new Section R12-1-104 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-104 repealed, new Section R12-1-104 renumbered from R12-1-112 and amended effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-105. Quality Factors for Converting Absorbed Dose to Dose Equivalent

- A. As used in these rules, the quality factors for converting absorbed dose to dose equivalent are shown in Table I.

TABLE I
QUALITY FACTORS AND ABSORBED DOSE
EQUIVALENCIES

TYPE OF RADIATION	Quality Factor (Q)	Absorbed Dose Equal to a Unit Dose Equivalent ^a
X, gamma, or beta radiation and high-speed electrons		1
Alpha particles, multiple-charged particles, fission fragments, and heavy particles of unknown charge	20	0.05
Neutrons of unknown energy	10	0.1
High-energy protons	10	0.1

^aThe absorbed dose in gray is equal to 1 Sv or the absorbed dose in rad is equal to 1 rem.

- B. If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in sievert per hour or rem per hour, 0.01 Sv (1 rem) of neutron radiation of unknown energies may, for purposes of these rules, be assumed to result from a total fluence of 25 million neutrons

per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee or registrant may use the fluence rate per unit dose equivalent or the appropriate Q value from Table II to convert a measured tissue dose in gray or rad to dose equivalent in sievert or rem.

TABLE II
MEAN QUALITY FACTORS, Q, AND FLUENCE PER UNIT DOSE EQUIVALENT FOR MONOENERGETIC NEUTRONS

	Neutron Energy (meV)	Quality Factor (Q)	Fluence per Unit Dose Equivalent ^b (neutrons cm ⁻² r _{cm} ⁻¹)	Fluence per Unit Dose Equivalent ^b (neutrons cm ⁻² S _v ⁻¹)
(thermal)	2.5E-8	2	980E+6	980E+8
	1E-7	2	980E+6	980E+8
	1E-6	2	810E+6	810E+8
	1E-5	2	810E+6	810E+8
	1E-4	2	840E+6	840E+8
	1E-3	2	980E+6	980E+8
	1E-2	2.5	1010E+6	1010E+8
	1E-1	7.5	170E+6	170E+8
	5E-1	11	39E+6	39E+8
	1	11	27E+6	27E+8
	2.5	9	29E+6	29E+8
	5	8	23E+6	23E+8
	7	7	24E+6	24E+8
	10	6.5	24E+6	24E+8
	14	7.5	17E+6	17E+8
	20	8	16E+6	16E+8
	40	7	14E+6	14E+8
	60	5.5	16E+6	16E+8
	1E+2	4	20E+6	20E+8
	2E+2	3.5	19E+6	19E+8
	3E+2	3.5	16E+6	16E+8
	4E+2	3.5	14E+6	14E+8

^a Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-centimeter diameter cylinder tissue-equivalent phantom.

^b Monoenergetic neutrons incident normally on a 30-centimeter diameter cylinder tissue-equivalent phantom.

Historical Note

Former Rule Section A.5; Former Section R12-1-105 repealed, new Section R12-1-105 adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2). New Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-106. Units of Activity

For purposes of these rules, activity is expressed in the SI unit of becquerel (Bq) or in the special unit of curie (Ci), or their multiples, or disintegrations or transformations per unit of time. The definitions for these units are located in R12-1-102.

Historical Note

Former Rule Section A.6; Former Section R12-1-1-6

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repealed, new Section R12-1-106 adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2). New Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-107. Misconduct

- A.** A licensee, registrant, applicant for a license or certificate of registration, or employee of a licensee, registrant, or applicant; or any contractor (including a supplier or consultant), subcontractor, or employee of a contractor or subcontractor of any licensee or certificate of registration holder who provides to any licensee, registrant, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's, registrant's, or applicant's activities in this Chapter, shall not:
1. Knowingly engage in conduct that violates or will result in a violation by a licensee, registrant, or applicant, of any statute, rule, regulation, or order; or any term, condition, or limitation of any license or registration issued by the Agency; or
 2. Knowingly submit to the Agency, or a licensee, registrant, or applicant, or a licensee's, registrant's, or applicant's contractor or subcontractor, information that is incomplete or inaccurate.
- B.** The Board shall impose the applicable civil penalty listed in R12-1-1216 on a person who violates subsection (A)(1) or (A)(2). For this purpose the person is classified as a Division II licensee and the violation is classified as a Severity II violation.
- C.** For the purposes of this Section, "misconduct" means conduct prohibited under subsection (A).
- D.** A person who is not a licensee, registrant, or applicant and knowingly violates a rule for the safe use of radiation sources in 12 A.A.C.1 is subject to the enforcement actions in 12 A.A.C. 1, Article 12.

Historical Note

Former Rule Section A.7; Former Section R12-1-107 repealed, new Section R12-1-107 adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2). New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-108. Repealed**Historical Note**

Former Rule Section A.8; Former Section R12-1-108 repealed, new Section R12-1-108 adopted effective June 30, 1977 (Supp. 77-3). Change of address (Supp. 85-6). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-109. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-110. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-111. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-112. Renumbered**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-112 renumbered to R12-1-104 effective April 2, 1990 (Supp. 90-2).

Appendix A. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 10, 1994 (Supp. 94-3).

Appendix B. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 10, 1994 (Supp. 94-3).

ARTICLE 2. REGISTRATION, INSTALLATION, AND SERVICE OF IONIZING RADIATION-PRODUCING MACHINES; AND CERTIFICATION OF MAMMOGRAPHY FACILITIES

R12-1-201. Exemptions

- A.** Electronic equipment that produces X-radiation incidental to its operation for other purposes is exempt from the registration and notification requirements of this Article, provided that an exposure rate, from any accessible surface, averaged over an area of 10 centimeters squared (1.55 inches squared) does not exceed 5 microsieverts (0.5 milliroentgen) per hour at 5 centimeters (2.0 inches).
- B.** The production, testing, or factory servicing of the electronic equipment in subsection (A) is not exempt from the requirements of this Article.
- C.** Radiation machines in storage or in transit to or from storage are exempt from the requirements of this Article.
- D.** Radiation machines rendered incapable of producing radiation are exempt from the requirements of this Article.

Historical Note

Former Rule Section B.3. Former Section R12-1-203 repealed, new Section R12-1-203 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-201 repealed, former Section R12-1-203 renumbered as R12-1-201 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-202. Application for Registration of Ionizing Radiation Producing Machines

- A.** A person shall not use a radiation machine except as authorized in this Article.
- B.** A person possessing a nonexempt radiation machine shall apply for registration of the machine with the Agency within 30 days after its installation. The person applying for registration of a radiation-producing machine shall use the application forms provided by the Agency. The applicant shall provide the information identified in Appendix A of this Article.
- C.** In addition to the application form or forms, the applicant shall remit the appropriate registration or licensing fee in R12-1-1306 and provide other information required by R12-1-208.
- D.** Each applicant that applies for registration of a stationary x-ray system, with the exception of applicants from bone densitometry, cabinet radiography, podiatry, dental, bone mineral analyzer and mammography facilities, shall provide a scale

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drawing of the room in which the x-ray system is located, or provide measurements from the radiation source to the surrounding barrier surfaces. The drawing shall denote the type of materials and the thickness (or lead equivalence) of each barrier of the room (walls, ceilings, floors, doors, windows). The drawing shall also denote the type and frequency of occupancy in adjacent areas, including those above and below the x-ray room of concern (e.g., hallways, offices, parking lots, and lavatories). Estimates of workload shall also be provided with the drawing.

- E. An applicant proposing to use a particle accelerator for medical purposes shall not use the particle accelerator until the Agency inspection required in R12-1-914 has been completed.

Historical Note

Former Rule Section B.4. Former Section R12-1-204 repealed, new Section R12-1-204 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-202 repealed, former Section R12-1-204 renumbered as R12-1-202 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective June 11, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-203. Application for Registration of Servicing and Installation

- A. Each person who is engaged in the business of installing or offering to install radiation machines shall apply for registration. For purposes of this Chapter, install includes selling and servicing, or offering to sell or service, x-ray machines in Arizona.
- B. The applicant shall complete the application for registration on forms that request information required by A.R.S. § 30-672.01, provided by the Agency.

Historical Note

Former Rule Section B.5. Former Section R12-1-205 repealed, new Section R12-1-205 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-205 renumbered as R12-1-203 and amended effective November 22, 1988 (Supp. 88-4). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-204. Issuance of Notice of Registration

- A. Upon determining that the application meets the requirements of the Act and this Article, the Agency shall issue a Notice of Registration.
- B. All radiation machines located at the same facility may be registered using one Notice of Registration.

Historical Note

Former Rule Section B.6. Former Section R12-1-206 repealed, new Section R12-1-206 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-206 renumbered as R12-1-204 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2).

R12-1-205. Expiration of Notice of Registration or Certification

- A. Except as provided in subsection (B), a Notice of Registration, issued according to R12-1-204, or a certificate issued accord-

ing to R12-1-208, expires at the end of the day on the expiration date stated in the Notice of Registration or certificate.

- B. If an application for renewal is filed by the registrant or certificate holder not less than 30 days prior to the expiration of the Notice of Registration or certificate, the Notice of Registration or certificate does not expire until a final determination is made by the Agency on the renewal application.

Historical Note

Former Rule Section B.7. Former Section R12-1-207 repealed, new Section R12-1-207 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-207 renumbered as R12-1-205 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-206. Assembly, Installation, Removal from Service, and Transfer

- A. A person who assembles, or installs ionizing radiation machines in this state shall notify the Agency in writing within 15 days of:
1. The name and address of the person possessing the machine that was assembled or installed;
 2. The manufacturer, model, and serial number of each radiation machine with the tube housing model number and serial number, maximum kVp, and maximum mA, assembled or installed; and
 3. The date each machine was assembled or installed, or the first clinical procedure is performed.
- B. Any person who possesses a radiation machine registered by the Agency shall notify the Agency within 15 days of the machine being taken out of service. The written notification shall contain the name and address of the person receiving the machine, if it is sold, leased, or transferred to another person; the manufacturer, model, and serial number of the machine; and the date the machine was taken out of service.
- C. In the case of diagnostic x-ray systems that contain certified components, an assembler shall, within 15 days following completion of the assembly, submit to the Agency a copy of the assembler's report (FDA Report No. 2579) prepared in compliance with requirements in 21 CFR 1020.30(d), revised April 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The report shall suffice in lieu of any other report by the assembler, if it contains the information required in subsection (A).
- D. A person shall not make, sell, lease, transfer, lend, assemble, service, or install radiation machines or the supplies used in connection with radiation machines unless the supplies and equipment when properly placed in operation and used, meet the requirements of these rules.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-209 renumbered as Section R12-1-206 and amended effective November 22, 1988 (Supp. 88-4). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-207. Reciprocal Recognition of Out-of-state Radiation Machines

- A. If any radiation machine is to be brought into the state for temporary use, the person proposing to bring the radiation machine into the state shall provide written notice to the Agency at least three working days before the radiation machine is to be used in the state. The notice shall include the type of radiation machine; the nature, duration, and scope of use; and the exact location where the radiation machine is to be used. If, for a specific case, the three working-day period would impose an undue hardship, the person may upon application to the Agency, obtain permission to proceed sooner.
- B. In addition, the owner of the radiation machine and the person possessing the machine while in the state shall:
 - 1. Comply with all applicable rules of the Agency;
 - 2. Upon request, supply the Agency with a copy of the machine's registration and other information regarding the safe operation of the machine while it is in the state; and
 - 3. Upon request, supply the Agency with the work authorization from the Agency, machine registration, operating and emergency procedures, utilization log, survey instrument and associated calibration record, and training records for all users.
- C. A radiation machine shall not be operated within the state on a temporary basis in excess of 180 calendar days per year.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-210 renumbered as Section R12-1-207 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-208. Certification of Mammography Facilities

An applicant seeking certification of a facility according to A.R.S. § 30-672(J) shall:

- 1. Provide evidence with the application that a quality assurance program has been established and is in use under R12-1-614(B)(1) and (2),
- 2. Provide evidence with the application that physicians reading mammographic images have the training and experience required in A.R.S. § 32-2842, and
- 3. Provide evidence with the application that physicians reading mammographic images have met the minimum criteria established by their respective licensing boards, as required in A.R.S. § 32-2842(C).

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective November 22, 1988 (Supp. 88-4). New Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Corrected subsection (1) by adding reference to R12-1-614(B)(1) and (2), which was inadvertently omitted in 03-3 rulemaking (Supp. 14-1).

R12-1-209. Notifications

- A. A registrant shall notify the Agency within 30 days of any change to the information contained in the notice of registration or a certificate issued according to R12-1-208.
- B. A person who possesses a radiation machine registered by the Agency shall notify the Agency within 15 days if the machine is discarded or transferred to another person. In the notice, the person shall provide the name and address of the person who

receives the machine, if it is sold, leased, or transferred to another person; the manufacturer, model, and serial number of the machine; and the date the machine was taken out of service.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix A. Application Information

An application shall contain the following information as required in R12-1-202(B), before a registration will be issued. The Agency shall provide an application form to an applicant with a guide, if available, or shall assist the applicant to ensure that only correct information is provided on the application.

Name and mailing address of applicant	Use location
Person responsible for radiation safety program	Telephone number
Type of facility	Facility subtype
Legal structure and ownership	Signature of certifying agent
Radiation machine information	Equipment identifiers
Shielding information	Scale drawing, if applicable
Equipment operator instructions and restrictions	Physicist name and training, if applicable
Classification of professional in charge	
Record of calibration for therapy units	Type of request: amendment, new, or renewal
Protection survey results, if applicable	
Type of industrial radiography program, if applicable	
Radiation Safety Officer name, if applicable	Contact person
Other registration requirements listed in Articles 2, 6, 8, 9, and 11	Appropriate fee listed in Article 13 schedule

Historical Note

Appendix repealed; new Appendix made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

ARRA-4. Repealed

Historical Note

Appendix A, Form ARRA-4 adopted effective November 22, 1988 (Supp. 88-4). Appendix A, Form ARRA-4 repealed, new Form ARRA-4 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4X. Repealed

Historical Note

Form ARRA-4X adopted effective April 17, 1996 (Supp.

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96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4XT. Repealed**Historical Note**

Form ARRA-4XT adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4PAT. Repealed**Historical Note**

Form ARRA-4PAT adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4IG. Repealed**Historical Note**

Form ARRA-4IG adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4IR. Repealed**Historical Note**

Form ARRA-4IR adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4PAR. Repealed**Historical Note**

Form ARRA-PAR adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4PA. Repealed**Historical Note**

Form ARRA-4PA adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

ARRA-13. Repealed**Historical Note**

Form ARRA-13 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1004. Repealed**Historical Note**

Form ARRA-1004 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1005. Repealed**Historical Note**

Form ARRA-1005 adopted effective April 17, 1996

(Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1030. Repealed**Historical Note**

Form ARRA-1030 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1050. Repealed**Historical Note**

Form ARRA-1050 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1070. Repealed**Historical Note**

Form ARRA-1070 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1090. Repealed**Historical Note**

Form 1090 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARTICLE 3. RADIOACTIVE MATERIAL LICENSING**R12-1-301. Ownership, Control, or Transfer of Radioactive Material**

- A.** In addition to the requirements of this Article, all licensees are subject to the requirements of 12 A.A.C. 1, Article 1, Article 4, and Article 10. Licensees engaged in industrial radiographic operations are subject to the requirements of 12 A.A.C. 1, Article 5; licensees using radioactive material in the practice of medicine are subject to the requirements of 12 A.A.C. 1, Article 7; licensees transporting radioactive material are subject to the requirements contained in 12 A.A.C. 1, Article 15; and licensees using radioactive material in well logging operations are subject to the requirements in 12 A.A.C. 1, Article 17.
- B.** Notwithstanding any other provisions of this Article, any person may own radioactive material, provided that the ownership does not include the actual possession, custody, use, or physical transfer of radioactive material or the manufacture or production of any article that contains radioactive material without the applicable certification, license, or registration.
- C.** A manufacturer, processor, or producer of any equipment, device, commodity, or other product that contains source material or radioactive material whose subsequent possession, use, transfer, or disposal by all other persons is exempt from regulatory requirements may only obtain authority to transfer possession or control of the material from the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Historical Note

Former Rule Section C.1. Former Section R12-1-301 repealed, new Section R12-1-301 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-301 renumbered to R12-1-322, new Section R12-1-301 adopted effective February 18, 1994 (Supp. 94-1). Former Section R12-1-301 repealed; new Section R12-1-301 renumbered from R12-1-302 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

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R12-1-302. Source Material; Exemptions

- A.** Any person is exempt from this Article to the extent the person receives, possesses, uses, delivers or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than 1/20th of 1 percent (0.0005) of the mixture, compound, solution, or alloy.
- B.** Any person is exempt from this Article to the extent the person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material, provided that, the person does not refine or process the ore except as authorized in a specific license.
- C.** Any person is exempt from this Article if the person receives, possesses, uses, or transfers:
1. Any quantities of thorium contained in:
 - a. Incandescent gas mantles;
 - b. Vacuum tubes;
 - c. Welding rods;
 - d. Electric lamps for illuminating purposes provided that each lamp does not contain more than 50 milligrams of thorium;
 - e. Germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting, provided that each lamp does not contain more than 2 grams of thorium;
 - f. Rare earth metals, compounds, mixtures, or products containing not more than 0.25 percent by weight thorium, uranium, or any combination of thorium and uranium; or
 - g. Individual neutron dosimeters, provided that each dosimeter does not contain more than 50 milligrams of thorium;
 2. Source material contained in the following products:
 - a. Glazed ceramic tableware, provided that the glaze contains not more than 20 percent source material by weight;
 - b. Glassware, glass enamel and glass enamel frit containing not more than 10 percent source material by weight, but not including commercially manufactured glass brick, pane glass, ceramic tile or other glass, glass enamel or ceramic used in construction; or
 - c. Piezoelectric ceramic containing not more than 2 percent source material by weight;
 3. Photographic film, negatives, and prints containing uranium or thorium;
 4. Any finished product or part fabricated of, or containing, tungsten-thorium or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed 4 percent by weight and that the exemption contained in this subsection does not authorize the chemical, physical, or metallurgical treatment or processing of the finished product or part;
 5. Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of counterweights, provided that:
 - a. The counterweights are manufactured in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, authorizing distribution by the licensee according to 10 CFR 40;
 - b. Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "DEPLETED URANIUM";
 - c. Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED"; and
 - d. The exemption contained in this item does not authorize the chemical, physical, or metallurgical treatment or processing of any counterweight other than repair or restoration of any plating or other covering; and
 - e. The requirements specified in subsections (C)(5)(b) and (c) do not apply to counterweights manufactured prior to December 31, 1969; provided, that these counterweights are impressed with the legend, "CAUTION – RADIOACTIVE MATERIAL – URANIUM."
6. Natural or depleted uranium metal used as shielding and constituting part of any shipping container; provided that:
 - a. The shipping container is conspicuously and legibly impressed with the legend "CAUTION – RADIOACTIVE SHIELDING – URANIUM," and
 - b. The uranium metal is encased in mild steel or equally fire resistant metal with minimum wall thickness of 1/8 inch (3.2 mm).
 7. Thorium contained in finished optical lenses, provided that each lens does not contain more than 30 percent of thorium by weight, and that the exemption contained in this item does not authorize either:
 - a. The shaping, grinding, or polishing of a thoriated lens or manufacturing processes other than the assembly of a thoriated lens into optical systems and devices without any alteration of the lens; or
 - b. The receipt, possession, use, or transfer of thorium contained in contact lenses, spectacles, or the eye-pieces of binoculars or other optical instruments;
 8. Uranium contained in detector heads of fire detection units, provided that each detector head contains not more than 5 nanocuries (185 Bq) of uranium; or
 9. Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:
 - a. The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide), and
 - b. The thorium content in the nickel-thoria alloy does not exceed 4 percent by weight.
- D.** The exemptions in subsection (C) do not authorize the manufacture of any of the products described.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended subsection (C) effective November 22, 1988 (Supp. 88-4). Former Section R12-1-302 renumbered to R12-1-303, new Section R12-1-302 renumbered from R12-1-301 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-302 renumbered to R12-1-301; new Section R12-1-302 renumbered from R12-1-303 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-303. Radioactive Material Other Than Source Material; Exemptions

- A.** Exempt concentrations
1. Except as provided in subsection (A)(3) and (A)(4), any person is exempt from this Article if the person receives, possesses, uses, transfers, owns, or acquires products or materials containing radioactive material in concentrations not in excess of those listed in Exhibit A.
 2. This Section shall not be deemed to authorize the import of radioactive material or products containing radioactive material.

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3. A manufacturer, processor, or producer of a product or material is exempt from the requirements for a license issued under R12-1-311(A) or the requirements of this Article to the extent that this person transfers radioactive material contained in a product or material in concentrations not in excess of those specified in Exhibit A of this Article and introduced into the product or material by a licensee holding a specific license issued by the NRC expressly authorizing such introduction. This exemption does not apply to the transfer of radioactive material contained in any food, beverage, cosmetic, drug, or other commodity or product designed for ingestion or inhalation by, or application to, a human being.
 4. A person shall not introduce radioactive material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under subsection (A)(1) or equivalent Regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State, except in accordance with a license issued under 10 CFR 32.11.
- B. Exempt items**
1. Except for persons who apply radioactive material to, or persons who incorporate radioactive material into the following products, or persons who initially transfer for sale or distribution the following products, a person is exempt from this Chapter to the extent that the person receives, possesses, uses, transfers, owns, or acquires the following products:
 - a. Timepieces, hands, or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:
 - i. 925 megabecquerels (25 millicuries) of tritium per timepiece,
 - ii. 185 megabecquerels (5 millicuries) of tritium per hand,
 - iii. 555 megabecquerels (15 millicuries) of tritium per dial (bezels when used shall be considered part of the dial),
 - iv. 3.7 megabecquerels (100 microcuries) of promethium-147 per watch or 7.4 megabecquerels (200 microcuries) of promethium-147 per any other timepiece,
 - v. 740 kBq (20 microcuries) of promethium-147 per watch hand or 1.48 megabecquerels (40 microcuries) of promethium-147 per other timepiece hand,
 - vi. 2.22 megabecquerels (60 microcuries) of promethium-147 per watch dial or 4.44 MBq (120 microcuries) of promethium-147 per other timepiece dial (bezels, when used, shall be considered part of the dial),
 - vii. The levels of radiation from hands and dials containing promethium-147 shall not exceed, when measured through 50 milligrams per square centimeter of absorber:
 - (1) For wrist watches, 1.0 μ Gy (0.1 millirad) per hour at 10 centimeters from any surface of the watch;
 - (2) For pocket watches, (0.1 millirad) per hour at 1 centimeter from any surface;
 - (3) For any other timepiece, 2.0 μ Gy (0.2 millirad) per hour at 10 centimeters from any surface;
 - viii. 37 kBq (1 microcurie) of radium-226 per timepiece in intact timepieces manufactured prior to November 30, 2007;
 - b. Static elimination devices which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 18.5 MBq (500 μ Ci) of polonium-210 per device.
 - i. Ion generating tubes designed for ionization of air that contain, as a sealed source or sources, radioactive material consisting of a total of not more than 18.5 MBq (500 μ Ci) of polonium-210 per device or of a total of not more than 1.85 GBq (50 mCi) of hydrogen-3 (tritium) per device.
 - ii. Such devices authorized before October 23, 2012 for use under the general license then provided in R12-1-306 and equivalent regulations of the NRC or Agreement State and manufactured, tested, and labeled by the manufacturer in accordance with the specifications contained in a specific license issued by the NRC.
 - c. Balances of precision containing not more than 37 megabecquerels (1 millicurie) of tritium per balance or not more than 18.5 megabecquerels (0.5 millicurie) of tritium per balance part manufactured before December 17, 2007;
 - d. Marine compasses containing not more than 27.75 gigabecquerels (750 millicuries) of tritium gas and other marine navigational instruments containing not more than 9.25 gigabecquerels (250 millicuries) of tritium gas manufactured before December 17, 2007;
 - e. Ionization chamber smoke detectors containing not more than 37 kBq (1 microcurie) of americium-241 per detector in the form of a foil and designed to protect life and property from fires;
 - f. Electron tubes: Provided that each tube does not contain more than one of the following specified quantities of radioactive material:
 - i. 5.55 GBq (150 millicuries) of tritium per microwave receiver protector tube or 370 megabecquerels (10 millicuries) of tritium per any other electron tube;
 - ii. 37 kBq (1 microcurie) of cobalt 60;
 - iii. 185 kBq (5 microcuries) of nickel 63;
 - iv. 1.11 megabecquerels (30 microcuries) of krypton 85;
 - v. 185 kBq (5 microcuries) of cesium 137;
 - vi. 1.11 megabecquerels (30 microcuries) of promethium-147;
 - vii. And provided further, that the level of radiation due to radioactive material contained in each electron tube does not exceed 10 μ Gy (1 millirad) per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber. The term "electron tubes" includes spark gap tubes, power tubes, gas tubes, including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical current;
 - g. Ionizing radiation measuring instruments containing, for purposes of internal calibration or standard-

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- ization, one or more sources of radioactive material provided that:
- i. Each source contains no more than one exempt quantity set forth in Exhibit B of this Article; and
 - ii. Each instrument contains no more than 10 exempt quantities. For the purposes of this subsection, an instrument's source or sources may contain either one type or different types of radionuclide and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in Exhibit B of this Article, provided the sum of the fractions do not exceed unity;
 - iii. For the purposes of subsection (B)(1)(h) only, 185 kBq (50 nanocurie) of americium-241 is considered an exempt quantity under Exhibit B of this Article;
- h. Any person who desires to apply radioactive material to, or to incorporate radioactive material into, the products exempted in subsection (B)(1)(a), or who desires to initially transfer for sale or distribution such products containing radioactive material, should apply for a specific license pursuant to R12-1-311 of this Article, which license states that the product may be distributed by the licensee to persons exempt from the rules pursuant R12-1-303 (A)(1).
2. Self-luminous products containing tritium, krypton-85, or promethium-147:
 - a. Except for persons who manufacture, process, produce, initially transfer for sale or distribution self-luminous products containing tritium, krypton-85, or promethium-147, and except as provided in paragraph (c) of this subsection, a person is exempt from this Chapter if the person receives, possesses, uses, owns, transfers or acquires tritium, krypton-85 or promethium-147 in self-luminous products manufactured, processed, produced, imported, initially transferred for sale or distribution, or transferred under a specific license issued by the U.S. Nuclear Regulatory Commission and described in 10 CFR 32.22, and the license authorizes the transfer of the products to persons who are exempt from regulatory requirements.
 - b. Any person who desires to manufacture, process, or produce, or initially transfer for sale or distribution self-luminous products containing tritium, krypton-85, or promethium-147 for use under paragraph (a) of this subsection, should apply for a license described in R12-1-311.
 - c. The exemption in paragraph (a) of this subsection does not apply to tritium, krypton-85, or promethium-147 used in products for primarily frivolous purposes or in toys or adornments.
 - d. A person is exempt from this Chapter if the person receives, possesses, uses, or transfers articles containing less than 3.7 kBq (100 nanocuries) of radium-226, manufactured prior to October 1, 1978.
 3. Gas and aerosol detectors containing radioactive material
 - a. Except for persons who manufacture, process, produce, or initially transfer for sale or distribution gas and aerosol detectors containing radioactive material, a person is exempt from this Chapter if the person receives, possesses, uses, transfers, owns, or acquires radioactive material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards, provided that detectors containing radioactive material shall be manufactured, imported, or transferred according to a specific license issued by the U.S. Nuclear Regulatory Commission and described in 10 CFR 32.26, or equivalent regulations of an Agreement or Licensing State, this exemption also covers gas and aerosol detectors manufactured or distributed before November 30, 2007 in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, or equivalent regulations of an Agreement or Licensing State and the license authorizes the transfer of the detectors to persons who are exempt from regulatory requirements.
 - b. Any person who desires to manufacture, process, or produce gas and aerosol detectors containing byproduct material, or to initially transfer such products for use under paragraph (a) of this subsection, should apply for a license described in R12-1-311.
 - c. Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an Agreement State are exempt under subsection (B)(4)(a), provided that the device is labeled in accordance with the specific license authorizing distribution of the general licensed device, and that the detectors meet the requirements of the regulations of the U.S. Nuclear Regulatory Commission.
 4. Certain industrial devices
 - a. Except for persons who manufacture, process, produce, or initially transfer for sale or distribution industrial devices containing byproduct material designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing an ionized atmosphere, any person is exempt from the requirements for a license set forth in this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires byproduct material, in these certain detecting, measuring, gauging, or controlling devices and certain devices for producing an ionized atmosphere, and manufactured, processed, produced, or initially transferred in accordance with a specific license issued under R12-1-311 of this Article, which license authorizes the initial transfer of the device for use under this section. This exemption does not cover sources not incorporated into a device, such as calibration and reference sources.
 - b. Any person who desires to manufacture, process, produce, or initially transfer, for sale or distribution, industrial devices containing byproduct material for use under paragraph (1) of this subsection, shall apply for a license described in R12-1-311.
- C. Exempt quantities
1. Except as provided in subsections (C)(2), (3), and (7), a person is exempt from this Chapter if the person receives, possesses, uses, transfers, owns, or acquires radioactive material in individual quantities each of which does not exceed the applicable quantity set forth in Exhibit B of this Article.
 2. This subsection does not authorize the production, packaging, or repackaging or transfer of radioactive material for purposes of commercial distribution, or the incorpora-

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tion of radioactive material into products intended for commercial distribution.

3. Except as specified in this subsection, a person shall not, for purposes of commercial distribution, transfer radioactive material in the individual quantities set forth in Exhibit B of this Article, knowing or having reason to believe the described quantities of radioactive material will be transferred to persons exempt under subsection (C) or equivalent regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State. A person may transfer radioactive material for commercial distribution under a specific license issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.18 which license states that the radioactive material may be transferred by the licensee to persons exempt under this subsection or the equivalent regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State.
4. Sources containing exempt quantities of radioactive material shall not be bundled or placed in close proximity for the purpose of using the radiation from the combined sources in place of a single source, containing a licensable quantity of radioactive material.
5. Possession and use of bundled or combined sources containing exempt quantities of radioactive material in unregistered devices by persons exempt from licensing is prohibited.
6. Any person, who possesses radioactive material received or acquired before September 25, 1971, under the general license issued under R12-1-311(A) of this Article or similar general license of an Agreement State or the NRC, is exempt from the requirements for a license issued under R12-1-311(A) of this Article to the extent that this person possesses, uses, transfers, or owns radioactive material.
7. No person may, for purposes of producing an increased radiation level, combine quantities of radioactive material covered by the exemption described in subsection (C)(6) so that the aggregate quantity exceeds the limits set forth in Exhibit B, except for radioactive material combined within a device placed in use before May 3, 1999, or as otherwise permitted by the rules in this Section.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-303 renumbered to R12-1-304, new Section R12-1-303 renumbered from R12-1-302 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-303 renumbered to R12-1-302; new Section R12-1-303 renumbered from R12-1-304 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-304. License Types

- A. Activities requiring license. Except as provided in 10 CFR 30.3 (revised January 1, 2013, incorporated by reference, and available under R12-1-101; this incorporated material contains no future editions or amendments) this Section and for persons exempt as provided in R12-1-302 and R12-1-303 of this Article,

no person shall manufacture, produce, transfer, receive, acquire, own, possess, or use byproduct material except as authorized in a specific or general license issued in accordance with the regulations in this chapter and in accordance with 10 CFR 30.3.

- B. Licenses for radioactive materials are of two types: general and specific.
 1. A general license is provided by rule, grants authority to a person for certain activities involving radioactive material, and is effective without the filing of an application with the Agency or the issuance of a licensing document to a particular person. However, registration with the Agency may be required by the particular general license.
 2. The Agency issues a specific license to a named person who has filed an application for a license under the applicable provision of this Chapter. A specific licensee is subject to all of the applicable rules in this Chapter and any limitation contained in the license document.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-304 renumbered to R12-1-305, new Section R12-1-304 renumbered from R12-1-303 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-304 renumbered to R12-1-303; new Section R12-1-304 renumbered from R12-1-305 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-305. General Licenses – Source Material

- A. This subsection grants a general license that authorizes commercial and industrial firms; research, educational, and medical institutions; and state and local government agencies to use, and transfer not more than 6.8 kg (15 pounds) of source material at any one time for research, development, educational, commercial, or operational purposes. A person authorized under this subsection shall not receive more than 68.2 kg (150 pounds) of source material in one calendar year.
- B. A person who receives, possesses, uses, or transfers source material under a general license granted under subsection (A) is exempt from the provisions of 12 A.A.C. 1, Article 4 and Article 10, provided the receipt, possession, use, or transfer is within the terms of the general license. This exemption does not apply to any person who is also in possession of source material under a specific license issued under this Article.
- C. This subsection grants a general license that authorizes a person to receive acquire, possess, use, or transfer depleted uranium contained in industrial products and devices provided:
 1. The depleted uranium is contained in the industrial product or device for the purpose of providing a concentrated mass in a small volume of the product or device;
 2. The industrial products or devices have been manufactured or initially transferred in accordance with a specific license governed by R12-1-311(M), or a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State that authorizes manufacture of the products or devices for distribution to persons generally licensed by the U.S. Nuclear Regulatory Commission or an Agreement State;
 3. The person files an ARRA 23 “Registration Certificate -- Use of Depleted Uranium Under General License” with the Agency. The person shall provide the information requested on the certificate and listed in Exhibit E. The

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person shall submit the information within 30 days after first receipt or acquisition of the depleted uranium, returning the completed registration certificate to the Agency. The person shall report in writing to the Agency any change in information originally submitted to the Agency on ARRA 23. The person shall submit the change report within 30 days after the effective date of the described change.

- D.** A person who receives, acquires, possesses, or uses depleted uranium according to the general license provided under subsection (C) shall:
1. Not introduce depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium;
 2. Not abandon the depleted uranium;
 3. Transfer the depleted uranium as prescribed in R12-1-318. If the transferee receives the depleted uranium under a general license established by subsection (C), the transferor shall furnish the transferee with a copy of this Section and a copy of the registration certificate. If the transferee receives the depleted uranium under a general license governed by a regulation of the U.S. Nuclear Regulatory Commission or an Agreement State that is equivalent to subsection (C), the transferor shall furnish the transferee a copy of the equivalent rule and a copy of the registration certificate, accompanied by a letter explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or an Agreement State under requirements substantially similar to those in this Section;
 4. Within 30 days of any transfer, report in writing to the Agency the name and address of the person receiving the depleted uranium; and
 5. Not export depleted uranium except under a license issued by the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 110.
- E.** A person who receives, acquires, possesses, uses, or transfers depleted uranium in accordance with a general license granted under subsection (C) is exempt from the requirements of 12 A.A.C. 1, Articles 4 and 10 with respect to the depleted uranium covered by that general license.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-305 renumbered to R12-1-306, new Section R12-1-305 renumbered from R12-1-304 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-305 renumbered to R12-1-304; new Section R12-1-305 renumbered from R12-1-306 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-306. General License – Radioactive Material Other Than Source Material

- A.** Certain measuring, gauging or controlling devices and certain devices for producing light or an ionized atmosphere.
1. This subsection grants a general license to a commercial or industrial firm; a research, educational or medical institution; an individual conducting business; or a state or local government agency to receive, acquire, possess, use, or transfer radioactive material contained in devices designed and manufactured for the purpose of detecting,

measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere, according to the provisions of 10 CFR 31.5(b), (c), and (d), (Revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.

2. A general licensee shall receive a device from one of the specific licensees described in this Section or through a transfer made under subsection (A)(4)(k).
3. A general license in subsection (A)(1) applies only to radioactive material contained in devices that have been manufactured or initially transferred and labeled in accordance with the requirements contained in:
 - a. A specific license issued under R12-1-311(A), or
 - b. An equivalent specific license issued by the NRC or another Agreement State.
 - c. An equivalent specific license issued by a State with rules or regulations comparable to this Section.
4. A person who acquires, receives, possesses, uses, or transfers radioactive material in a device licensed under subsection (A)(1) or through a transfer made under subsection (A)(4)(h), shall:
 - a. Ensure that all labels and safety statements affixed to a device at the time of receipt and bearing a statement that removal of the label is prohibited are maintained and not removed, and comply with all instructions and precautions on the labels.
 - b. Ensure that the device is tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at other intervals as specified on the label.
 - i. A general licensee need not test a device that contains only krypton for leakage of radioactive material; and
 - ii. A general licensee need not test a device for leakage of radioactive material if the device contains only tritium, not more than 3.7 megabecquerels (100 microcuries) of other beta and/or gamma emitting material, or 370 kilobecquerels (10 microcuries) of alpha emitting material, or the device is held in storage, in the original shipping container, before initial installation.
 - c. Ensure that the tests required by subsection (A)(4)(b) and other testing, installation, servicing, and removal from installation involving the radioactive material or its shielding or containment, are performed:
 - i. In accordance with the device label instructions, or
 - ii. By a person holding a specific license under R12-1-311(A) or in accordance with the provisions of a specific license issued by the NRC or an Agreement State which authorizes distribution of devices to persons generally licensed by the NRC or an Agreement State.
 - d. Maintain records of compliance with the requirements in subsections (A)(4)(b) and (c) that show the results of tests; the dates that required activities were performed, and the names of persons performing required activities involving radioactive material from the installation and its shielding or containment. The records shall be maintained for three

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- years from the date of the recorded event or until transfer or disposal of the device.
- e. Immediately suspend operation of a device if there is a failure of, or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on-off mechanism or indicator, or upon the detection of 185 becquerel (0.005 microcurie) or more of removable radioactive material.
 - i. A general licensee shall not operate the device until it has been repaired by the manufacturer or another person holding a specific license to repair this type of device that was issued by the Agency under R12-1-311(A), the NRC, or an Agreement State which authorizes distribution of devices to persons generally licensed by the NRC or an Agreement State.
 - ii. If necessary the general licensee shall dispose of the device and any radioactive material from the device by transfer to a person authorized by a specific license to receive the radioactive material in the device or as otherwise approved by the Agency.
 - iii. Within 30 days of an event governed by subsection (A)(4)(e) the general licensee shall furnish a report that contains a brief description of the event and the remedial action taken and, in the case of detection of 185 Becquerel (0.005 microcurie) or more of removable radioactive material or failure of or damage to a source likely to result in contamination of the general licensee's facility or the surrounding area, if applicable, a plan for ensuring that the general licensee's facility and surrounding area, if applicable, are acceptable for unrestricted use. The radiological criteria for unrestricted use in R12-1-452 may be used to prepare the plan, as determined by the Agency, on a case-by-case basis.
 - f. Not abandon a device that contains radioactive material.
 - g. Not export a device that contains radioactive material except in accordance with 10 CFR 110, revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.
 - h. Transfer or dispose of a device that contains radioactive material only by export as authorized in subsection (A)(4)(g), transfer to another general licensee as authorized in subsection (A)(4)(k) or a person who is authorized to receive the device by a specific license issued by the Agency, the NRC, or an Agreement State, or collection as waste if authorized by equivalent regulations of an Agreement State, or the NRC, or as otherwise approved under subsection (A)(4)(j).
 - i. Within 30 days after the transfer or export of a device to a specific licensee, furnish a report to the Agency. The report shall:
 - i. Identify the device by manufacturer's (or initial transferor's) name, model number, and serial number;
 - ii. Provide the name, address, and license number of the person receiving the device (license number not applicable if exported); and
 - iii. Provide the date of transfer or export.
 - j. Obtain written Agency approval before transferring a device to any other specific licensee that is not authorized in accordance with subsection (A)(4)(h).
 - k. Transfer a device to another general licensee only:
 - i. If the device remains in use at a particular location. The transferor shall provide the transferee with a copy of this Section, a copy of R12-1-443, R12-1-445, and R12-1-448 and any safety documents identified on the device label. Within 30 days of the transfer, the transferor shall report to the Agency the manufacturer's (or initial transferor's) name; the model number and the serial number of the device transferred; the transferee's name and mailing address for the location of use; and the name, title, and telephone number of the responsible individual appointed by the transferee in accordance with subsection (A)(4)(n); or
 - ii. If the device is held in storage in the original shipping container at its intended location of use before initial use by a general licensee, and by a person that is not a party to the transaction.
 - l. Comply with the provisions of R12-1-443, R12-1-444, R12-1-445, R12-1-447, and R12-1-448 for reporting and notification of radiation incidents, theft or loss of licensed material, and is exempt from the other requirements of 12 A.A.C. 1, Articles 4 and 10.
 - m. Respond to written requests from the Agency to provide information relating to the general license within 30 days from the date on the request, or a longer time period specified in the request. If the general licensee cannot provide the requested information within the specified time period, the general licensee shall request a longer period to supply the information before expiration of the time period, providing the Agency with a written justification for the request.
 - n. Appoint an individual responsible for knowledge of applicable laws and possessing the authority to take actions required to comply with applicable radiation safety laws. The general licensee, through this individual, shall ensure the day-to-day compliance with applicable radiation safety laws. This provision does not relieve the general licensee of responsibility.
 - o. Register, in accordance with subsections (A)(4)(p) and (q), any device that contains at least 370 megabecquerels (10 millicuries) of cesium-137, 3.7 megabecquerels (0.1 millicuries) of strontium-90, 37 megabecquerels (1 millicurie) of cobalt-60, or 37 megabecquerels (1 millicurie) of americium-241 or any other transuranic (i.e., element with atomic number greater than uranium (92)), based on the activity indicated on the label. Each address for a location of use, as described under subsection (A)(4)(q)(iv), represents a separate general licensee and requires a separate registration and fee.
 - p. Register each device annually with the Agency and pay the fee required by R12-1-1306, Category D4, if in possession of a device that meets the criteria in subsection (A)(4)(o). The general licensee shall register by verifying, correcting, and adding to the information provided in a request for registration received from the Agency. The registration information shall be submitted to the Agency within 30 days from the date on the request for registration. In addition,

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tion, a general licensee holding devices meeting the criteria of subsection (A)(4)(o) is subject to the bankruptcy notification requirements in R12-1-313(D).

- q. In registering a device, furnish the following information and any other registration information specifically requested by the Agency:
 - i. Name and mailing address of the general licensee;
 - ii. Information about each device, including the manufacturer (or initial transferor), model number, serial number, radioisotope, and activity (as indicated on the label);
 - iii. Name, title, and telephone number of the responsible individual appointed by the general licensee under subsection (A)(4)(n);
 - iv. Address or location at which each device is used and stored. For a portable device, the address of the primary place of storage;
 - v. Certification by the responsible individual that the information concerning each device has been verified through a physical inventory and review of label information; and
 - vi. Certification by the responsible individual that the individual is aware of the requirements of the general license.
 - r. Report a change in mailing address for the location of use or a change in the name of the general licensee to the Agency within 30 days of the effective date of the change. For a portable device, a report of address change is only required for a change in the device's primary place of storage.
 - s. Not use a device if the device has not been used for a period of two years. If a device with shutters is not being used, the general licensee shall ensure that the shutters are locked in the closed position. The testing required by subsection (A)(4)(b) need not be performed during a period of storage. However, if a device is put back into service or transferred to another person, and has not been tested during the required test interval, the general licensee shall ensure that the device is tested for leakage before use or transfer and that the shutter is tested before use. A device kept in standby for future use is excluded from the two-year time limit in this subsection if the general licensee performs a quarterly physical inventory regarding the standby devices.
5. A person that is generally licensed by an Agreement State with respect to a device that meets the criteria in subsection (A)(4)(o) is exempt from registration requirements if the device is used in an area subject to Agency jurisdiction for a period less than 180 days in any calendar year. The Agency does not request registration information from a general licensee if the device is exempted from licensing requirements in subsection (A)(4)(o).
 6. The general license granted under subsection (A)(1) is subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 12, and 15, and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
 7. The general license in subsection (A)(1) does not authorize the manufacture or import of devices containing byproduct material.
- B. Luminous safety devices for aircraft**
1. This subsection grants a general license that authorizes a person to own, receive, acquire, possess, and use tritium or promethium-147 contained in luminous safety devices

for use in aircraft, provided that each device contains not more than 370 gigabecquerels (10 curies) of tritium or 11.1 gigabecquerels (300 millicuries) of promethium-147; and each device has been manufactured, assembled, initially transferred, or imported according to a specific license issued by the U.S. Nuclear Regulatory Commission, or each device has been manufactured or assembled according to the specifications contained in a specific license issued to the manufacturer or assembler of the device by the Agency or any Agreement State or Licensing State in accordance with licensing requirements equivalent to those in 10 CFR 32.53.

2. A person who owns, receives, acquires, possesses, or uses a luminous safety device according to the general license granted in subsection (B)(1) is:
 - a. Exempt from the requirements of 12 A.A.C. 1, Article 4 and Article 10 except that the person shall comply with the reporting and notification provisions of R12-1-443, R12-1-444, R12-1-445, R12-1-447, and R12-1-448;
 - b. Not authorized to manufacture, assemble, repair, or import a luminous safety device that contains tritium or promethium-147;
 - c. Not authorized to export luminous safety devices containing tritium or promethium-147;
 - d. Not authorized to own, receive, acquire, possess, or use radioactive material contained in instrument dials; and
 - e. Subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
- C. This subsection grants a general license that authorizes a person who holds a specific license to own, receive, possess, use, and transfer radioactive material if the Agency issues the license; or special nuclear material if the NRC issues the license. For americium-241, radium-226, and plutonium contained in calibration or reference sources, this subsection grants a general license in accordance with the provisions of subsections (C)(1), (2), and (3). For plutonium, ownership is included in the licensed activities.**
1. This subsection grants a general license for calibration or reference sources that have been manufactured according to the specifications contained in a specific license issued to the manufacturer or importer of the sources by the U.S. Nuclear Regulatory Commission under 10 CFR 32.57 or 10 CFR 70.39. This general license also governs calibration or reference sources that have been manufactured according to specifications contained in a specific license issued to the manufacturer by the Agency, an Agreement State, or a Licensing State, according to licensing requirements equivalent to those contained in 10 CFR 32.57 or 10 CFR 70.39, revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.
 2. A general license granted under subsection (C) or (C)(1) is subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 4, 10, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689. In addition, a person who owns, receives, acquires, possesses, uses, or transfers one or more calibration or reference sources under a general license granted under subsection (C) or (C)(1) shall:
 - a. Not possess at any one time, at any location of storage or use, more than 185 kBq (5 microcuries) of

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- americium-241, plutonium, or radium-226 in calibration or reference sources;
- b. Not receive, possess, use, or transfer a calibration or reference source unless the source, or the storage container, bears a label that includes one of the following statements, as applicable, or a substantially similar statement that contains the same information:
- i. The receipt, possession, use and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of the U.S. Nuclear Regulatory Commission or a state with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION – RADIOACTIVE MATERIAL – THIS SOURCE CONTAINS (name of the appropriate material) – DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

Name of manufacturer or importer

- ii. The receipt, possession, use and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of any Licensing State. Do not remove this label.

CAUTION – RADIOACTIVE MATERIAL – THIS SOURCE CONTAINS RADIUM-226. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

Name of manufacturer or importer

- c. Not transfer, abandon, or dispose of a calibration or reference source except by transfer to a person authorized to receive the source by a license from the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State;
- d. Store a calibration or reference source, except when the source is being used, in a closed container designed, constructed, and approved for containment of americium-241, plutonium, or radium-226 which might otherwise escape during storage; and
- e. Not use a calibration or reference source for any purpose other than the calibration of radiation detectors or the standardization of other sources.
3. The general license granted under subsection (C) or (C)(1) does not authorize the manufacture or import of calibration or reference sources that contain americium-241, plutonium, or radium-226.
4. The general license granted under subsections (C) or (C)(1) does not authorize the manufacture or export of calibration or reference sources that contain americium-241, plutonium, or radium-226.
- D.** This subsection grants a general license that authorizes a person to receive, possess, use, transfer, own, or acquire carbon-14 urea capsules, which contain one microcurie of carbon-14 urea for “in vivo” human diagnostic use:
1. Except as provided in subsections (D)(2) and (3), a physician is exempt from the requirements for a specific license, provided that each carbon-14 urea capsule for “in vivo” diagnostic use contains no more than 1 microcurie.
 2. A physician who desires to use the capsules for research involving human subjects shall obtain a specific license issued according to the specific licensing requirements in this Article.
3. A physician who desires to manufacture, prepare, process, produce, package, repackage, or transfer carbon-14 urea capsules for commercial distribution shall obtain a specific license from the Agency, issued according to the requirements in 10 CFR 32.21, (Revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.)
 4. Nothing in this subsection relieves physicians from complying with applicable FDA and other federal and state requirements governing receipt, administration, and use of drugs.
- E.** This subsection grants a general license that authorizes any physician, clinical laboratory, or hospital to use radioactive material for certain “in vitro” clinical or laboratory testing.
1. The general licensee is authorized to receive, acquire, possess, transfer, or use, for any of the following stated tests, the following radioactive materials in prepackaged units:
 - a. Iodine-125, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or radiation from such material, to human beings or animals.
 - b. Iodine-131, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - c. Carbon-14, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - d. Hydrogen-3 (tritium), in units not exceeding 1.85 megabecquerel (50 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - e. Iron-59, in units not exceeding 740 kilobecquerel (20 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - f. Cobalt-57 or selenium-75, in units not exceeding 370 kilobecquerels (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - g. Mock iodine-125 reference or calibration sources, in units not exceeding 1.85 kBq (50 nanocurie) of iodine-129 and 185 becquerel (5 nanocurie) of americium-241 each, for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 2. A person shall not acquire, receive, possess, use, or transfer radioactive material according to the general license established by this subsection until the person has filed with the Agency ARRA-9, “Certificate -- “In Vitro” Testing with Radioactive Material Under General License,” provided the information listed in Exhibit E, and received a validated copy of ARRA-9, which indicates the assigned certification number. The physician, clinical lab-

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- oratory, or hospital shall furnish on ARRA-9 the following information:
- a. Name, telephone number, and address of the physician, clinical laboratory, or hospital; and
 - b. A statement that the physician, clinical laboratory, or hospital has radiation measuring instruments to carry out "in vitro" clinical or laboratory tests with radioactive material and that tests will be performed only by personnel competent to use the instruments and handle the radioactive material.
3. A person who receives, acquires, possesses, or uses radioactive material according to the general license granted under this subsection shall:
 - a. Not possess at any one time, in storage or use, a combined total of not more than 7.4 megabecquerels (200 microcuries) of iodine-125, iodine-131, iron-59, cobalt-57, or selenium-75 in excess of 7.4 megabecquerels (200 microcuries), or acquire or use in any one calendar month more than 18.5 megabecquerels (500 microcuries) of these radionuclides.
 - b. Store the radioactive material, until used, in the original shipping container or in a container that provides equivalent radiation protection.
 - c. Use the radioactive material only for the uses authorized by subsection (E).
 - d. Not transfer radioactive material to a person who is not authorized to receive it according to a license issued by the Agency, the U.S. Nuclear Regulatory Commission, or any Agreement State or Licensing State, or in any manner other than in an unopened, labeled shipping container received from the supplier.
 - e. Not dispose of a mock iodine-125 reference or calibration source described subsection (E)(1) except as authorized by R12-1-434.
 - f. Package or prepackage a unit bearing a durable, clearly visible label: identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed 0.37 megabecquerel (10 microcuries) of iodine-131, iodine-125, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3 (tritium); or 0.74 megabecquerel (20 microcuries) of iron-59; or Mock Iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 0.185 kilobecquerel (0.005 microcurie) of americium-241 each; or cobalt-57 in units not exceeding 0.37 megabecquerel (10 microcuries).
 - g. Package to display the radiation caution symbol and the words, "Caution, Radioactive Material", and "Not for Internal or External Use in Humans or Animals."
 4. The general licensee shall not receive, acquire, possess, transfer, or use radioactive material according to subsection (E)(1):
 - a. Except as prepackaged units that are labeled according to the provisions of a specific license issued by the U.S. Nuclear Regulatory Commission, or any Agreement State that authorizes the manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), iron-59, cobalt-57, selenium-75, or mock iodine-125 for distribution to persons generally licensed under subsection (E) or its equivalent federal law; and
 - b. Unless one of the following statements, or a substantially similar statement that contains the same information, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure that accompanies the package:
 - i. This radioactive material may be acquired, received, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from such material, to human beings or animals. The acquisition, receipt, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.

 Name of manufacturer
 - ii. This radioactive material shall be acquired, received, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from such material, to human beings or animals. The receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of a Licensing State.

 Name of manufacturer
 5. A physician, clinical laboratory or hospital that possesses or uses radioactive material under a general license granted by subsection (E):
 - a. Shall report to the Agency in writing, any change in the information furnished on the ARRA-9. The report shall be furnished within 30 days after the effective date of the change; and
 - b. Is exempt from the requirements of 12 A.A.C. 1, Article 4 and Article 10 with respect to radioactive material covered by the general license, except that a person using mock iodine-125 sources, described in subsection (E)(1)(g), shall comply with the provisions of R12-1-434, R12-1-443, and R12-1-444 of this Chapter.
 6. For the purposes of subsection (E), a licensed veterinary care facility is considered a "clinical laboratory."
- F.** This subsection grants a general license that authorizes a person to own, receive, acquire, possess, use, and transfer strontium-90, contained in ice detection devices, provided each device contains not more than 1.85 megabecquerels (50 microcuries) of strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission or each device has been manufactured according to the specifications contained in a specific license issued by the Agency or any Agreement State to the manufacturer of the device under licensing requirements equivalent to those in 10 CFR 32.61. A person who receives, owns, acquires, possesses, uses, or transfers strontium-90 contained in ice detection devices under a general license in accordance with subsection (F):
1. Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating, discontinue use of the device until it has been inspected, tested for leakage, and repaired by a person who holds a specific license from the U.S. Nuclear Regulatory Commission or an Agreement State to manufacture

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- or service ice detection devices; or dispose of the device according to the provisions of R12-1-434;
2. Shall assure that each label, affixed to the device at the time of receipt, which bears a statement that prohibits removal of the labels, maintained on the device; and
 3. Is exempt from the requirements of 12 A.A.C. 1, Article 4 and Article 10, except that the user of an ice detection device shall comply with the provisions of R12-1-434, R12-1-443 and R12-1-444.
 4. Shall not manufacture, assemble, disassemble, repair, or import an ice detection device that contains strontium-90.
 5. Is subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 12, and 15, and A.R.S. §§ 30-654(B), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
- G.** This subsection grants a general license that authorizes a person to acquire, receive, possess, use, or transfer, in accordance with the provisions of subsections (H) and (I), radium-226 contained in the following products manufactured prior to November 30, 2007.
1. Antiquities originally intended for use by the general public. For the purposes of this paragraph, antiquities mean products originally intended for use by the general public and distributed in the late 19th and early 20th centuries, such as radium emanator jars, revigators, radium water jars, radon generators, refrigerator cards, radium bath salts, and healing pads.
 2. Intact timepieces containing greater than 0.037 megabecquerel (1 microcurie), nonintact timepieces, and timepiece hands and dials no longer installed in timepieces.
 3. Luminous items installed in air, marine, or land vehicles.
 4. All other luminous products, provided that no more than 100 items are used or stored at the same location at any one time.
 5. Small radium sources containing no more than 0.037 megabecquerel (1 microcurie) of radium-226. For the purposes of this paragraph, "small radium sources" means discrete survey instrument check sources, sources contained in radiation measuring instruments, sources used in educational demonstrations (such as cloud chambers and spinthariscopes), electron tubes, lightning rods, ionization sources, static eliminators, or as designated by the NRC.
- H.** Persons who acquire, receive, possess, use, or transfer byproduct material under the general license issued in subsection (G) are exempt from the provisions 12 A.A.C. 1, Articles 1, 3, 4, 7, 10, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689, to the extent that the receipt, possession, use, or transfer of byproduct material is within the terms of the general license; provided, however, that this exemption shall not be deemed to apply to any such person specifically licensed under this chapter. Any person who acquires, receives, possesses, uses, or transfers byproduct material in accordance with the general license in subsection (G):
1. Shall notify the Agency should there be any indication of possible damage to the product so that it appears it could result in a loss of the radioactive material. A report containing a brief description of the event, and the remedial action taken, must be furnished to the Agency within 30 days.
 2. Shall not abandon products containing radium-226. The product, and any radioactive material from the product, may only be disposed of according to Article 4 or by transfer to a person authorized by a specific license to receive the radium-226 in the product or as otherwise approved by the Agency.
 3. Shall not export products containing radium-226 except in accordance with 10 CFR 110 revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.
 4. Shall dispose of products containing radium-226 at a disposal facility authorized to dispose of radioactive material in accordance with any federal or state solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005, by transfer to a person authorized to receive radium-226 by a specific license issued under Article 3, equivalent regulations of an Agreement State, or the NRC.
 5. Shall respond to written requests from the Agency to provide information relating to the general license within 30 calendar days of the date of the request, or other time specified in the request. If the general licensee cannot provide the requested information within the allotted time, it shall, within that same time period, request a longer period to supply the information by providing the Agency Director a written justification for the request.
- I.** The general license in subsection (G) does not authorize the manufacture, assembly, disassembly, repair, or import of products containing radium-226, except that timepieces may be disassembled and repaired.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-306 renumbered to R12-1-307, new Section R12-1-306 renumbered from R12-1-305 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-306 renumbered to R12-1-305; new Section R12-1-306 renumbered from R12-1-307 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-307. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective December 20, 1985 (Supp. 85-6). Former Section R12-1-307 renumbered to R12-1-308, new Section R12-1-307 renumbered from R12-1-306 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-307 renumbered to R12-1-306; new Section R12-1-307 renumbered from R12-1-308 and repealed by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-308. Filing Application for Specific Licenses

- A.** An applicant for a specific license shall file an Agency application. The applicant shall prepare the application in duplicate, one copy for the Agency and the other for the applicant.
- B.** The Agency may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Agency to determine whether the application should be granted or denied or whether a license should be modified or revoked.

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- C. Each application shall contain the information specified in Exhibit (E) of this Article and be signed by the applicant, licensee, or person duly authorized to act for the applicant or licensee.
- D. Unless R12-1-1302 precludes combination with a license of another category, an application for a specific license may include a request for a license that authorizes more than one activity.
- E. In the application, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Agency provided the references are clear and specific.
- F. The Agency shall make applications and documents submitted to the Agency available for public inspection, but may withhold any document or part of a document from public inspection if disclosure of its content is not required in the public interest and would adversely affect the interest of a person concerned.
- G. Except as provided in subsections (G)(1), (2), and (3), an application for a specific license to use byproduct material in the form of a sealed source or in a device that contains the sealed source must either identify the source or device by manufacturer and model number as registered with the Agency, NRC, or with an Agreement State, or, for a source or a device containing radium-226 or accelerator-produced radioactive material, with the Agency, NRC, or an Agreement State under 10 CFR 32.210 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
1. For sources or devices manufactured before October 23, 2012, that are not licensed under R12-1-306, R12-1-310, R12-1-311 or registered with the NRC or with an Agreement State, and for which the applicant is unable to provide all categories of information specified in 10 CFR 32.210(c) the application must include:
 - a. All available information identified in 10 CFR 32.210(c) concerning the source, and, if applicable, the device; and
 - b. Sufficient additional information to demonstrate that there is reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property. Such information must include a description of the source or device, a description of radiation safety features, the intended use and associated operating experience, and the results of a recent leak test.
 2. For sealed sources and devices allowed to be distributed without registration of safety information, the applicant may supply only the manufacturer, model number, and radionuclide and quantity.
 3. If it is not feasible to identify each sealed source and device individually, the applicant may propose constraints on the number and type of sealed sources and devices to be used and the conditions under which they will be used, in lieu of identifying each sealed source and device.
- H. A certificate holder or licensee who no longer manufactures or initially transfers any of the sealed source(s) or device(s) covered by a particular certificate issued with the Agency, NRC, or with an Agreement State shall request inactivation of the registration or license with the Agency, NRC, or with an Agreement State program that the device is currently registered by in accordance with 10 CFR 32.211 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-308 renumbered to R12-1-309, new Section R12-1-308 renumbered from R12-1-307 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-308 renumbered to R12-1-307; new Section R12-1-308 renumbered from R12-1-309 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-309. General Requirements for Issuance of Specific Licenses

A license application shall be approved if the Agency determines that:

1. The applicant is qualified by reason of training and experience to use the material in question for the purpose requested according to these rules, in a manner that will minimize danger to public health and safety or property;
2. The applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property;
3. The issuance of the license will not be inimical to the health and safety of the public;
4. The applicant satisfies all applicable special requirements in R12-1-310, R12-1-311, R12-1-322, R12-1-323, 12 A.A.C. 1, Articles 5, 7, and 17; and
5. The applicant demonstrates that a letter has been sent, return receipt requested, to the Mayor's office of the city, town, or, if not within an incorporated community, to the County Board of Supervisors of the county in which the applicant proposes to operate which describes:
 - a. The nature of the proposed activity involving radioactive material; and
 - b. The facility, including use and storage areas.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-309 renumbered to R12-1-310, new Section R12-1-309 renumbered from R12-1-308 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-309 renumbered to R12-1-308; new Section R12-1-309 renumbered from R12-1-310 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-310. Special Requirements for Issuance of Specific Broad Scope Licenses

- A. The Agency shall issue three classes of academic and industrial broad scope licenses, and only a single class A medical broad scope license.
1. The license may authorize the radioactive materials in multi-curie quantities, and may authorize other radioactive materials and forms in addition to those listed in subsection (A)(1)(a). A license is a broad scope class A license if it:
 - a. Contains the exact wording "Any radioactive material with Atomic Number 3 through 83" or "Any radioactive material with Atomic Number 84 through 92" in License Item 6; and
 - b. Contains the word "any" to authorize the chemical or physical form of the materials in License Item 7;

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2. A broad scope class B license is any specific license which authorizes the acquisition, possession, use, and transfer of the radioactive materials specified in Exhibit C of 12 A.A.C. 1, Article 3 in any chemical or physical form and in quantities determined as follows:
 - a. The possession limit, if only one radionuclide is possessed, is the quantity specified for that radionuclide in Exhibit C, Column I; or
 - b. The possession limit for multiple radionuclides is determined as follows: The sum of the ratios for all radionuclides possessed under the license shall not exceed unity (1). The ratio for each radionuclide is determined by dividing the quantity possessed by the applicable quantity in Exhibit C, Column I.
 3. A broad scope class C license is any specific license authorizing the possession and use of the radioactive materials specified in Exhibit C of 12 A.A.C. 1, Article 3 in any chemical or physical form and in quantities determined as follows:
 - a. The possession limit, if only one radionuclide is possessed, is the quantity specified for that radionuclide in Exhibit C, Column II; or
 - b. The possession limit for multiple radionuclides is determined as follows: The sum of the ratios for all radionuclides possessed under the license shall not exceed unity (1). The ratio for each radionuclide is determined by dividing the quantity possessed by the applicable quantity in Exhibit C, Column II.
- B. The Agency shall approve:**
1. An application for a class A broad scope license if:
 - a. The applicant satisfies the general requirements specified in R12-1-309;
 - b. The applicant has engaged in a reasonable number of activities involving the use of radioactive material. For purposes of this subsection, the requirement of "reasonable number of activities" can be satisfied by showing that the applicant has five years of experience in the use of radioactive material. The Agency may accept less than five years of experience if the applicant's qualifications are adequate for the scope of the proposed license; and
 - c. The applicant has established administrative controls and provisions relating to organization, management, procedures, recordkeeping, material control, accounting, and management review that are necessary to assure safe operations, including:
 - i. Establishment of a radiation safety committee composed of a radiation safety officer, a representative of management, and persons trained and experienced in the safe use of radioactive material;
 - ii. Appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters; and
 - iii. Establishment of appropriate administrative procedures to assure:
 - (1) Control of procurement and use of radioactive material;
 - (2) Completion of safety evaluations of proposed uses of radioactive material which take into consideration matters such as the adequacy of facilities and equipment, training and experience of the user, and operating or handling procedures; and
 - (3) Review, approval, and recording by the radiation safety committee of safety evaluations of proposed uses prepared in accordance with this subsection prior to use of the radioactive material.
 2. An application for a class B broad scope license if:
 - a. The applicant satisfies the general requirements specified in R12-1-309; and
 - b. The applicant has established administrative controls and provisions relating to organization, management, procedures, recordkeeping, material control, accounting, and management review that are necessary to assure safe operations, including:
 - i. Appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and available for advice and assistance on radiation safety matters; and
 - ii. Establishment of appropriate administrative procedures to assure:
 - (1) Control of procurement and use of radioactive material;
 - (2) Completion of safety evaluations of proposed uses of radioactive material which take into consideration matters such as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and
 - (3) Review, approval, and recording by the radiation safety officer of safety evaluations of proposed uses prepared according to subsection (B)(2)(b)(ii) prior to use of the radioactive material.
 3. An application for a class C broad scope license if:
 - a. The applicant satisfies the general requirements specified in R12-1-309; and
 - b. The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of, individuals who have received:
 - i. A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering; and
 - ii. At least 40 hours of training and experience in the safe handling of radioactive material, the characteristics of ionizing radiation, units of dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation appropriate to the type and forms of radioactive material to be used; and
 - c. The applicant has established administrative controls and provisions relating to procurement of radioactive material, procedures, recordkeeping, material control and accounting, and management review necessary to assure safe operations.
- C. Unless specifically authorized, broad-scope licensees shall not:**
1. Conduct tracer studies in the environment involving direct release of radioactive material;
 2. Acquire, receive, possess, use, own, import, or transfer devices containing 3.7 petabecquerels (100,000 curies) or more of radioactive material in sealed sources used for irradiation of materials;
 3. Conduct activities for which a specific license is issued under R12-1-311, and 12 A.A.C. 1, Articles 5, 7, or 17; or
 4. Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug, or other product designed

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- for ingestion or inhalation by, or application to, a human being.
- D. Radioactive material possessed under the class A broad scope license shall only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety committee.
- E. Radioactive material possessed under the class B broad scope license shall only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety officer.
- F. Radioactive material possessed under the class C broad scope license shall only be used by, or under the direct supervision of, individuals who satisfy the requirements of R12-1-310(B)(3)(b).
- (2) Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than 1 square centimeter; 2 Sv (200 rem)
- (3) Other organs: 500 mSv (50 rem)
- c. Each device bears a durable, legible, clearly visible label or labels that contain in a clearly identified and separate statement:

- i. Instructions and precautions necessary to assure safe installation, operating, and servicing of the device (documents such as operating and service manuals may be identified in the label and used to provide this information);
- ii. The requirement, or lack of requirement, for leak testing, or for testing any on-off mechanism and indicator, including the maximum time interval for the testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and
- iii. The information called for in one of the following statements in the same or substantially similar form:

The receipt, possession, use, and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent and the regulations of the U.S. Nuclear Regulatory Commission or a state with which the Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION – RADIOACTIVE MATERIAL

(name of manufacturer or distributor)

The receipt, possession, use and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent, and the regulations of a Licensing State. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION – RADIOACTIVE MATERIAL

(name of manufacturer or distributor)

- d. The model, serial number, and name of manufacturer or distributor may be omitted from the label if the information location is specified in labeling affixed to the device;
- e. Each device with a separable source housing that provides the primary shielding for the source also bears, on the source housing, a durable label that provides the device model number and serial number, the isotope and quantity, the words, "Caution-Radioactive Material," the radiation symbol described in R12-1-428, and the name of the manufacturer or initial distributor; and
- f. Each device meets the criteria in 10 CFR 31.5(c)(13)(i) (revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments) and bears a permanent (e.g., embossed, etched, stamped, or engraved) label affixed to the source housing, if separable, or the device if the source housing is not separable, that

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended effective November 5, 1993 (Supp. 93-4). Former Section R12-1-310 renumbered to R12-1-311, new Section R12-1-310 renumbered from R12-1-309 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-310 renumbered to R12-1-309; new Section R12-1-310 renumbered from R12-1-311 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-311. Special Requirements for a Specific License to Manufacture, Assemble, Repair, or Distribute Commodities, Products, or Devices that Contain Radioactive Material

- A. Licensing the manufacture and distribution of devices to persons generally licensed under R12-1-306(A).
1. The Agency shall grant a specific license to manufacture or distribute each device that contains radioactive material, excluding special nuclear material, to persons generally licensed under R12-1-306(A) or equivalent regulations of the U.S. NRC, an Agreement State, or the Licensing State if:
- a. The applicant satisfies the requirements of R12-1-309;
- b. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:
- i. The device can be safely operated by persons not having training in radiological protection;
- ii. Under ordinary conditions of handling, storage, and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive a dose in excess of 10 percent of the limits specified in R12-1-408; and
- iii. Under accident conditions (such as fire and explosion) associated with handling, storage, and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:
- (1) Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye: 150 mSv (15 rem)

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- includes the words, "Caution-Radioactive Material," and, if practicable, the radiation symbol described in R12-1-428.
- g. The device has been registered in the Sealed Source and Device Registry.
2. In the event the applicant desires that the device undergo mandatory testing at intervals longer than six months, either for proper operation of the on-off mechanism and indicator, if any, or for leakage of radioactive material or for both, the application shall contain sufficient information to demonstrate that the longer interval is justified by performance characteristics of the device or similar devices and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the on-off mechanism and indicator. In determining the acceptable interval for the test for leakage of radioactive material, the Agency shall consider information which includes, but is not limited to:
 - a. Primary containment (source capsule),
 - b. Protection of primary containment,
 - c. Method of sealing containment,
 - d. Containment construction materials,
 - e. Form of contained radioactive material,
 - f. Maximum temperature withstood during prototype tests,
 - g. Maximum pressure withstood during prototype tests,
 - h. Maximum quantity of contained radioactive material,
 - i. Radiotoxicity of contained radioactive material, and
 - j. Operating experience with identical devices or similarly designed and constructed devices.
 3. In the event the applicant desires that the general licensee under R12-1-306(A), or under equivalent regulations of the NRC or an Agreement State or Licensing State, be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on-off mechanism and indicator, or remove the device from installation, the application shall include written instructions to be followed by the general licensee, estimated calendar quarter doses associated with the activity or activities, and bases for the estimates. The submitted information shall demonstrate that performance of the activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive a dose in excess of 10 percent of the limits specified in R12-1-408.
 4. A licensee authorized under subsection (A) to distribute a device to a generally licensed person shall provide, if a device that contains radioactive material is to be transferred for use under the general license granted in R12-1-306(A), the name of each person that is licensed under R12-1-311(A) and the information specified in this subsection for each person to whom a device will be transferred. The licensee shall provide this information before the device may be transferred. In the case of transfer through another person, the licensee shall provide the listed information to the intended user before initial transfer to the other person.
 - a. The licensee shall provide:
 - i. A copy of the general license, issued under R12-1-306(A),
 - ii. A copy of R12-1-443 and R12-1-445,
 - iii. A list of the services that can only be performed by a specific licensee,
 - iv. Information on authorized disposal options, including estimated costs of disposal, and
 - v. A list of civil penalties for improper disposal.
 5. If radioactive material is to be transferred in a device for use under an equivalent general license of the NRC or another Agreement State, each person that is licensed under R12-1-304(B) shall provide the information specified in this subsection to each person to whom a device will be transferred. The licensee shall provide this information before the device is transferred. In the case of transfer through another person, the licensee shall provide the listed information to the intended user before initial transfer to the other person. The licensee shall provide:
 - a. A copy of the Agreement State's requirements that are equivalent to R12-1-306(A), and A.R.S. §§ 30-657, R12-1-443, and R12-1-445. If a copy of NRC regulations is provided to a prospective general licensee in lieu of the Agreement State's requirements, the licensee shall explain in writing that use of the device is regulated by the Agreement State. If certain requirements do not apply to a particular device, the licensee may omit the requirement from the material provided;
 - b. A list of the services that can only be performed by a specific licensee;
 - c. Information on authorized disposal options, including estimated costs of disposal; and
 - d. The name, title, address, and telephone number of the individual at the Agreement State regulatory agency who can provide additional information.
 6. A licensee may propose to the Agency an alternate method of informing the customer.
 7. If a licensee has notified the Agency of bankruptcy under R12-1-313(E) or is terminating under R12-1-319, the licensee shall provide, upon request, to the Agency, the NRC, or another Agreement State, records of the disposition as required under A.R.S. § 30-657.
 8. A licensee authorized to transfer a device to a generally licensed person, shall comply with the following requirements:
 - a. The person licensed under subsection (A) shall report all transfers of devices to persons for use under a general license obtained under R12-1-306(A), and all receipts of devices from persons licensed under R12-1-306(A) to the Agency, NRC, or other affected Agreement State. The report shall be submitted on a quarterly basis, in a clear and legible form, and contain the following information:
 - i. Report on a quarterly basis to the responsible Agreement State or NRC all transfers of devices to persons for use under a general license in accordance with 10 CFR 32.52, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 - ii. Maintain all information concerning transfers and receipts of devices that supports the reports required by subsection (A)(4)(b).
 - iii. Maintain records required by subsection (A)(4)(b) for a period of three years following the date of the recorded event.

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- i. The identity of each general licensee by name and mailing address for the location of use. If there is no mailing address for the location of use, the person licensed under subsection (A) shall submit an alternate address for the general licensee, along with information on the actual location of use;
 - ii. The name, title, and telephone number of a person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the applicable laws;
 - iii. The date of transfer;
 - iv. The type, model number, and serial number of the device transferred; and
 - v. The quantity and type of radioactive material contained in the device.
- b. If one or more intermediaries will temporarily possess the device at the intended place of use before its possession by the intended user, the report shall include the information required of the general licensee in subsection (A)(4) for both the intended user and each intermediary, clearly identifying the intended user and each intermediary.
- c. For devices received from a general licensee, licensed under R12-1-306(A), the report shall include:
- i. The identity of the general licensee by name and address;
 - ii. The type, model number, and serial number of the device received;
 - iii. The date of receipt; and
 - iv. In the case of a device not initially transferred by the reporting licensee, the name of the manufacturer or initial transferor.
- d. If the person licensed under subsection (A) makes a change to a device possessed by a general licensee so that the label must be changed to update required information, the report shall identify the general licensee, the device, and the changes to information on the device label.
- e. The report shall cover a calendar quarter, be filed within 30 days of the end of each calendar quarter, and clearly indicate the period covered by the report.
- f. The report shall clearly identify the person licensed under subsection (A) submitting the report and include the license number of the license.
- g. If no transfers are made to or from persons generally licensed under R12-1-306(A) during a reporting period, the person licensed under subsection (A) shall submit a report indicating the lack of activity.
9. The licensee shall maintain records of all transfers for Agency inspection. Records shall be maintained for three years after termination of the license to manufacture the generally licensed devices regulated under R12-1-306(A).
- B.** The Agency shall grant a specific license to manufacture, assemble, repair, or initially transfer luminous safety devices that contain tritium or promethium-147 for use in aircraft, for distribution to persons generally licensed under R12-1-306(B), if the applicant satisfies:
1. The general requirements specified in R12-1-309; and
 2. The requirements of 10 CFR 32.53 through 32.56 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** The Agency shall grant a specific license to manufacture or initially transfer calibration or reference sources that contain americium-241, radium-226, or plutonium for distribution to persons generally licensed under R12-1-306(C) if the applicant satisfies:
1. The general requirements of R12-1-309; and
 2. The requirements of 10 CFR 32.57, 32.58, 32.59, and 70.39, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- D.** The Agency shall grant a specific license to distribute radioactive material for use by a physician under the general license in R12-1-306(D) if:
1. The general requirements of R12-1-309; and
 2. The requirements of 10 CFR 32.57, 32.58, 32.59, and 70.39, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- E.** The Agency shall grant for a specific license to manufacture or distribute radioactive material for use under the general license of R12-1-306(E) if:
1. The applicant satisfies the general requirements specified in R12-1-309.
 2. The radioactive material is to be prepared for distribution in prepackaged units of:
 - a. Iodine-125 in units not exceeding 370 kBq (10 microcuries) each;
 - b. Iodine-131 in units not exceeding 370 kBq (10 microcuries) each;
 - c. Carbon-14 in units not exceeding 370 kBq (10 microcuries) each;
 - d. Hydrogen-3 (tritium) in units not exceeding 1.85 MBq (50 microcuries) each;
 - e. Iron-59 in units not exceeding 740 kBq (20 microcuries) each;
 - f. Cobalt-57 or selenium-75 in units not exceeding 370 kilobecquerels (10 microcuries) each;
 - g. Mock iodine-125 in units not exceeding 1.85 kBq (50 nanocuries) of iodine-129 and 185 Bq (5 nanocuries) of americium-241 each.
 3. Each prepackaged unit bears a durable, clearly visible label:
 - a. Identifying the radioactive contents as to chemical form and radionuclide and indicating that the amount of radioactivity does not exceed 370 kilobecquerels (10 microcuries) of iodine-125, iodine-131, cobalt-57, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3 (tritium); 740 kilobecquerels (20 microcuries) of iron-59; or mock iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 185 becquerels (0.005 microcurie) of americium-241 each; and
 - b. Displaying the radiation caution symbol described in R12-1-428, the words, "CAUTION, RADIOACTIVE MATERIAL," and the phrase "Not for Internal or External Use in Humans or Animals."
 4. One of the following statements, or a substantially similar statement that contains the information called for in the following statements appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure that accompanies the package:
 - a. This radioactive material may be received, acquired, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external

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administration of the material, or the radiation from the radioactive material, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.

Name of Manufacturer

- b. This radioactive drug may be received, acquired, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from the radioactive material, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of a Licensing State.

Name of Manufacturer

5. The label affixed to the unit, or the leaflet or brochure that accompanies the package, contains adequate information about the precautions to be observed in handling and storing the specified radioactive material. In the case of the mock iodine-125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in R12-1-434.
- F.** The Agency shall grant for a specific license to manufacture and distribute ice detection devices to persons generally licensed under R12-1-306(F) if the applicant satisfies:
1. The general requirements of R12-1-309; and
 2. The criteria of 10 CFR 32.61 and 32.62, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- G.** The Agency shall grant a specific license to manufacture, prepare, or transfer for commercial distribution radioactive drugs that contain radioactive material for use by a person authorized in accordance with Article 7 of this Chapter, if the applicant meets all of the requirements in 10 CFR 30.32(j) or 10 CFR 32.72, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
1. Authorization under this Section to produce Positron Emission Tomography (PET) radioactive drugs for noncommercial transfer to medical use licensees in its consortium does not relieve the licensee from complying with applicable FDA, other federal, and state requirements governing radioactive drugs.
 2. Each licensee authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall:
 - a. Satisfy the labeling requirements in R12-1-431 for each PET radioactive drug transport radiation shield and each syringe, vial, or other container used to hold a PET radioactive drug intended for noncommercial distribution to members of its consortium.
 - b. Possess and use instrumentation to measure the radioactivity of the PET radioactive drugs intended for noncommercial distribution to members of its consortium and meet the procedural, radioactivity measurement, instrument test, instrument check, and instrument adjustment requirements in R12-1-449.
 3. A licensee that is a pharmacy authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall require that any individual who prepares PET radioactive drugs be an:
 - a. Authorized nuclear pharmacist that meets the requirements in § R12-1-712, or
 - b. Individual under the supervision of an authorized nuclear pharmacist as specified in R12-1-706.
 4. A pharmacy, authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium that allows an individual to work as an authorized nuclear pharmacist, shall meet the requirements of R12-1-712.
- H.** The Agency shall grant a specific license to manufacture and distribute generators or reagent kits that contain radioactive material for preparation of radiopharmaceuticals by persons licensed according to 12 A.A.C. 1, Article 7 if:
1. The applicant satisfies the general requirements of R12-1-309;
 2. The applicant submits evidence that:
 - a. The generator or reagent kit is to be manufactured, labeled and packaged according to the Federal Food, Drug, and Cosmetic Act or the Public Health Service Act, a new drug application (NDA) approved by the Food and Drug Administration (FDA), a biologic product license issued by FDA, or a "Notice of Claimed Investigational Exemption for a New Drug" (IND) that has been accepted by the FDA; or
 - b. The manufacture and distribution of the generator or reagent kit are not subject to the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act.
 3. The applicant submits information on the radionuclide; chemical and physical form, packaging including maximum activity per package, and shielding provided by the packaging of the radioactive material contained in the generator or reagent kit;
 4. The label affixed to the generator or reagent kit contains information on the radionuclide, including quantity, and date of assay; and
 5. The label affixed to the generator or reagent kit, or the leaflet or brochure that accompanies the generator or reagent kit, contains:
 - a. Adequate information, from a radiation safety standpoint, on the procedures to be followed and the equipment and shielding to be used in eluting the generator or processing radioactive material with the reagent kit; and
 - b. A statement that this generator or reagent kit (as appropriate) is approved for use by persons licensed by the Agency under 12 A.A.C. 1, Article 7 or equivalent licenses of the U.S. Nuclear Regulatory Commission or an Agreement State or Licensing State. The labels, leaflets or brochures required by this subsection supplement the labeling required by FDA and they may be separate from or, with the approval of FDA, combined with the labeling required by FDA.
- I.** The Agency shall grant a specific license to manufacture and distribute sources and devices that contain radioactive material to a person licensed in accordance with Article 7 of this Chapter for use as a calibration, transmission, or reference source or for medical purposes, if the applicant meets all of the requirements in 10 CFR 32.74, revised January 1, 2015, incorporated

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by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

- J.** Requirements for license to manufacture and distribute industrial products containing depleted uranium for mass volume applications.
1. The Agency shall grant a specific license to manufacture industrial products and devices that contain depleted uranium for use under R12-1-305(C) or equivalent regulations of the U.S. Nuclear Regulatory Commission or an Agreement State if:
 - a. The applicant satisfies the general requirements in R12-1-309;
 - b. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive a radiation dose in excess of 10 percent of the limits specified in R12-1-408.
 - c. The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.
 2. In the case of an industrial product or device whose unique benefits are questionable, the Agency shall approve an application for a specific license under this subsection only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.
 3. The Agency may deny any application for a specific license under this subsection if the end use or uses of the industrial product or device cannot be reasonably foreseen.
 4. Each person licensed under subsection (J)(1) shall:
 - a. Maintain the level of quality control required by the license in the manufacture of the industrial product or device and the installation of the depleted uranium into the product or device;
 - b. Label or mark each unit to:
 - i. Identify the manufacturer of the product or device, the number of the license under which the product or device was manufactured or initially transferred, the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and
 - ii. State that the receipt, possession, use, and transfer of the product or device are subject to a general license or the equivalent and the regulations of the U.S. Nuclear Regulatory Commission or an Agreement State;
 - c. Assure that the depleted uranium, before being installed in each product or device, has been impressed with the following legend, clearly legible through any plating or other covering: "Depleted Uranium";
 - d. Furnish a copy of the general license contained in R12-1-305(C) and a copy of ARRA-23 to each person to whom depleted uranium in a product or device is transferred for use under a general license contained in R12-1-305(C); or
 - e. Furnish a copy of the general license contained in the U.S. Nuclear Regulatory Commission's or Agreement State's regulation equivalent to R12-1-305(C) and a copy of the U.S. Nuclear Regulatory Commission's or Agreement State's certificate, or alternatively, furnish a copy of the general license contained in R12-1-305(C) and a copy of ARRA-23 to each person to whom depleted uranium in a product or device is transferred for use under a general license of the U.S. Nuclear Regulatory Commission or an Agreement State, with a document explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or an Agreement State under requirements substantially the same as those in R12-1-305(C);
 - f. Report to the Agency all transfers of industrial products or devices to persons for use under the general license in R12-1-305(C). The report shall identify each general licensee by name and address, an individual by name or position who serves as the point of contact person for the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under R12-1-305(C) during the reporting period, the report shall so indicate;
 - i. Report to the U.S. Nuclear Regulatory Commission all transfers of industrial products or devices to persons for use under the U.S. Nuclear Regulatory Commission general license in 10 CFR 40.25; or
 - ii. Report to the responsible state agency all transfers of devices manufactured and distributed under subsection (J)(4)(f) for use under a general license in that state's regulations equivalent to R12-1-305(C);
 - iii. The report required in subsection (J)(4)(f)(i) or (ii) shall identify each general licensee by name and address, an individual by name or position who serves as the contact person for the general licensee, the type and model number of the device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which a product or device is transferred to the generally licensed person;
 - iv. If no transfers have been made to U.S. Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the U.S. Nuclear Regulatory Commission;
 - v. If no transfers have been made to general licensees within a particular Agreement State during the reporting period, this information shall be reported to the responsible Agreement state agency; and
 - vi. Keep records showing the name, address, and contact person for each general licensee to whom depleted uranium in industrial products or devices is transferred for use under a general license provided in R12-1-305(C) or equivalent

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regulations of the U.S. Nuclear Regulatory Commission or of an Agreement State. The records shall be maintained for a period of three years and show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the reporting requirements of this Section.

- K.** A licensee who manufactures nationally tracked sources, as defined in Article 4, shall:
1. Serialize the sources in accordance with 10 CFR 32.201, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments; and
 2. Report manufacturing activities in accordance with R12-1-454.

Historical Note

Former Rule Section C.101. Former Section R12-1-311 repealed, new Section R12-1-311 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-311 renumbered to R12-1-312, new Section R12-1-311 renumbered from R12-1-310 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-311 renumbered to R12-1-310; new Section R12-1-311 renumbered from R12-1-312 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016; correction made to subsection R12-1-311(D)(2) removing (a) and (b) to reflect renumbering scheme as submitted in Supp. 09-2 (Supp. 16-1).

R12-1-312. Issuance of Specific Licenses

- A.** Upon determination that a license application meets the requirements of the Act and Agency rules, the Agency shall grant a specific license that may contain conditions or limitations if the Agency has determined that additional requirements regarding the proposed activity will protect health and safety.
- B.** The Agency may incorporate in any license at the time of issuance, or thereafter by rule or order, additional requirements and conditions with respect to the licensee's receipt, possession, use, and transfer of radioactive material in order to:
1. Minimize danger to public health and safety or property;
 2. Require reports and recordkeeping, and provide for inspections of activities under the license as may be necessary to protect health and safety; and
 3. Prevent loss or theft of material subject to this Article.
- C.** The Agency may verify information contained in an application and secure additional information necessary to make a determination on issuance of a license and whether any special conditions should be attached to the license. The Agency may inspect the facility or location where radioactive materials would be possessed or used, and discuss details of the proposed possession or use of the radioactive materials with the applicant or representatives designated by the applicant.

Historical Note

Former Rule Section C.102; Former Section R12-1-312 repealed, new Section R12-1-312 adopted effective June

30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-312 renumbered to R12-1-313, new Section R12-1-312 renumbered from R12-1-311 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-312 renumbered to R12-1-311; new Section R12-1-312 renumbered from R12-1-313 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-313. Specific Terms and Conditions

- A.** Each license issued under this Article is subject to all provisions of A.R.S. Title 30, Chapter 4 and to all rules, regulations, and orders of the Agency.
- B.** A licensee shall not transfer, assign, or in any manner dispose of a license issued or granted under this Article or a right to possess or utilize radioactive material granted by any license issued under this Article unless the Agency finds that the transfer is consistent with the Agency's statutes and rules, and gives its consent in writing. An application for transfer of license must include:
1. The identity, technical and financial qualifications of the proposed transferee; and
 2. Financial assurance for decommissioning information required by R12-1-323.
- C.** Each person licensed by the Agency under this Article shall confine the use and possession of the material licensed to the locations and purposes authorized in the license.
- D.** Each license issued pursuant to the rules in Articles 3, 5, 7, and 15 of this Chapter shall be deemed to contain the provisions set forth in the Act, whether or not these provisions are expressly set forth in the license.
- E.** The Agency may incorporate, in any license issued pursuant to the rules in this Chapter, at the time of issuance, or thereafter by appropriate rule, regulation or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use and transfer of byproduct material as it deems appropriate or necessary in order to:
1. Promote the common defense and security;
 2. Protect health or to minimize danger to life or property;
 3. Protect restricted data; or
 4. Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be necessary or appropriate to effectuate the purposes of the Act and rules thereunder.
- F.** Licensees required to submit emergency plans in accordance with R12-1-322 shall follow the emergency plan approved by the Agency. The licensee may change the approved plan without Agency approval only if the changes do not reduce the commitment of the plan. The licensee shall furnish the change to the Agency and to affected offsite response organizations within six months after the change is made. Proposed changes that reduce, or potentially reduce, the commitment of the approved emergency plan may not be implemented without prior application to and prior approval by the Agency.
- G.** Each person licensed under this Section and each general licensee that is required to register under R12-1-306(A)(4)(o) shall notify the Agency in writing if the licensee decides to permanently discontinue any or all activities involving materials authorized under the license. A specific licensee or general licensee shall notify the Agency, in writing:
1. Immediately following the filing of a petition for bankruptcy under any Chapter of Title 11 of the United States Code if the petition for bankruptcy is by or against:
 - a. The licensee;

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- b. An entity (as defined in the bankruptcy code) controlling the licensee or listing the license or licensee as property of the estate; or
 - c. An affiliate (as defined in the bankruptcy code) of the licensee.
2. Providing the following information:
- a. The bankruptcy court in which the petition for bankruptcy was filed, and
 - b. The bankruptcy case title and number, and
 - c. The date the petition was filed.

- H.** Each licensee preparing technetium-99m radiopharmaceuticals from molybdenum-99/technetium-99m generators or rubidium-82 from strontium-82/rubidium-82 generators shall test the generator eluates for molybdenum-99 breakthrough or strontium-82 and strontium-85 contamination, respectively, in accordance with R12-1-720. The licensee shall record the results of each test and retain each record for three years after the record is made.

Historical Note

Former Rule Section C.103; Former Section R12-1-313 repealed, new Section R12-1-313 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended effective June 20, 1990 (Supp. 90-2). Former Section R12-1-313 renumbered to R12-1-314, new Section R12-1-313 renumbered from R12-1-312 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-313 renumbered to R12-1-312; new Section R12-1-313 renumbered from R12-1-314 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-314. Expiration of License

Except as provided in R12-1-315(B), each specific license expires at the end of the day, in the month and year stated on the license.

Historical Note

Former Rule Section C.104; Former Section R12-1-314 repealed, new Section R12-1-314 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-314 renumbered to R12-1-315, new Section R12-1-314 renumbered from R12-1-313 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-314 renumbered to R12-1-313; new Section R12-1-314 renumbered from R12-1-315 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-315. Renewal of License

- A.** An applicant shall file an application for renewal of a specific license according to R12-1-308.
- B.** If a licensee files a renewal application not less than 30 days before the license expiration date and the existing license and associated renewal application is in proper form, the existing license does not expire until a final renewal determination is made by the Agency.

Historical Note

Former Rule Section C.105; Former Section R12-1-315 repealed, new Section R12-1-315 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-315 renumbered to R12-1-316, new Section R12-1-315 renumbered from R12-1-314 effective February 18, 1994 (Supp. 94-

1). Former Section R12-1-315 renumbered to R12-1-314; new Section R12-1-315 renumbered from R12-1-316 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-316. Amendment of Licenses at Request of Licensee

An applicant shall file an application for amendment of a specific license by complying with R12-1-308 and specifying the grounds for the amendment.

Historical Note

Former Rule Section C.106; Former Section R12-1-316 repealed, new Section R12-1-316 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-316 renumbered to R12-1-317, new Section R12-1-316 renumbered from R12-1-315 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-316 renumbered to R12-1-315; new Section R12-1-316 renumbered from R12-1-317 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-317. ARRA Action on Applications to Renew or Amend

In considering an application by a licensee to renew or amend a specific license, the Agency shall apply the criteria set forth in R12-1-309, R12-1-310, or R12-1-311 as applicable.

Historical Note

Former Rule Section C.107; Former Section R12-1-317 repealed, new Section R12-1-317 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-317 renumbered to R12-1-318, new Section R12-1-317 renumbered from R12-1-316 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-317 renumbered to R12-1-316; new Section R12-1-317 renumbered from R12-1-318 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-318. Transfer of Radioactive Material

- A.** A licensee shall not transfer radioactive material except as authorized under this Section.
- B.** Except as otherwise provided in the license and subject to the provisions of subsections (C) and (D), any licensee may transfer radioactive material:
 - 1. To the Agency; after receiving prior approval from the Agency;
 - 2. To the Department of Energy;
 - 3. To any person exempt from the rules in this Article to the extent permitted under the exemption;
 - 4. To any person authorized to receive radioactive material under terms of a general license or its equivalent, or a specific license or equivalent licensing document, issued by the Agency, the U.S. Nuclear Regulatory Commission, or any Agreement State or Licensing State, or to any person otherwise authorized to receive radioactive material by the Federal Government or any agency of the Federal Government, the Agency, any Agreement State or Licensing State; or
 - 5. As otherwise authorized by the Agency in writing.
- C.** Before transferring radioactive material to a specific licensee of the Agency, the U.S. Nuclear Regulatory Commission, or an Agreement State or Licensing State, or to a general licensee who is required to register with the Agency, the U.S. Nuclear Regulatory Commission, or an Agreement State or Licensing State prior to receipt of the radioactive material, the licensee

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transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred.

- D.** The transferor shall use one or more of the following methods for the verification required by subsection (C):
1. The transferor shall possess, and read, a current copy of the transferee's specific license or registration certificate;
 2. The transferor shall possess a written certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date;
 3. For emergency shipments the transferor shall accept oral certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date; provided the oral certification is confirmed in writing within 10 days;
 4. The transferor shall obtain information equivalent to that in subsection (D)(1) to (3) compiled by a reporting service from official records of the Agency, the U.S. Nuclear Regulatory Commission, or the licensing agency of an Agreement State or Licensing State regarding the identity of any licensee and the scope and expiration date of any license, registration, or certificate; or
 5. When none of the methods of verification described in subsections (D)(1) to (4) are readily available or when a transferor desires to verify that information received by one of the above methods is correct or up-to-date, the transferor shall obtain and record confirmation from the Agency, the U.S. Nuclear Regulatory Commission, or the licensing agency of an Agreement State or Licensing State that the transferee is licensed to receive the radioactive material.
- E.** A transferor shall prepare and transport radioactive material as prescribed in the provisions of 12 A.A.C. 1, Article 15.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-318 renumbered to R12-1-319, new Section R12-1-318 renumbered from R12-1-317 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-318 renumbered to R12-1-317; new Section R12-1-318 renumbered from R12-1-319 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-319. Modification, Revocation, or Termination of a License

- A.** The terms and conditions of all licenses are subject to amendment, revision, or modification, and a license may be suspended or revoked by reason of amendments to the Agency's statutes or rules and orders issued by the Agency.
- B.** The Agency may revoke, suspend, or modify any license, in whole or in part, for any material false statement in the application; any omission or misstatement of fact required by statute, rule, or order, or because of conditions revealed by the application or any report, record, or inspection or other means that would cause the Agency to refuse to grant a license; or any violation of license terms and conditions, or the Agency's statutes, rules, or orders.
- C.** Except in cases of willfulness or those in which the public health, interest, or safety requires otherwise, the Agency shall

not modify, suspend, or revoke a license unless, before the institution of proceedings, facts or conduct that may warrant action have been called to the attention of the licensee in writing and the licensee has been accorded an opportunity to demonstrate or achieve compliance.

- D.** The Agency may terminate a specific license upon a written request by the licensee that provides evidence the licensee has met the termination criteria in R12-1-451, R12-1-452, and the decommissioning requirements in R12-1-323.
- E.** Specific licenses, including expired licenses, continue in effect until terminated by written notice to the licensee, when the Agency determines that the licensee has:
1. Properly disposed of all radioactive material;
 2. Made a reasonable effort to eliminate residual radioactive contamination, if present;
 3. Performed an accurate radiation survey that demonstrates the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-323;
 4. Submitted other information that is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-323.
 5. Provided records to the Agency that detail the disposal of all radioactive material in unsealed form with a half-life greater than 120 days, and copies of the records required by 10 CFR 30.35(g), January 1, 2004, which is incorporated by reference and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-319 renumbered to R12-1-320, new Section R12-1-319 renumbered from R12-1-318 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-319 renumbered to R12-1-318; new Section R12-1-319 renumbered from R12-1-320 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-320. Reciprocal Recognition of Licenses

- A.** This subsection grants a general license to perform specific licensed activities in Arizona for a period not to exceed 180 days in any calendar year to any person who holds a specific license from an Agreement State, where the licensee maintains an office for directing the licensed activity and retaining radiation safety records, is granted a general license to conduct the same activity involving the use of radioactive material from the U.S. Nuclear Regulatory Commission, Licensing State, or any Agreement State, provided that:
1. The license does not limit the activity to specific installations or locations;
 2. Following the first notification, application, and payment of fees, the licensee shall notify the agency three days prior to entering the state and prior to each non-consecutive visit while reciprocity remains in effect.
 3. The out-of-state licensee complies with all applicable statutes, now or hereafter in effect, rules, and orders of the Agency and with all the terms and conditions of the license, except those terms and conditions inconsistent with applicable statutes, rules and orders of the Agency;

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4. The out-of-state licensee supplies any other information the Agency requests; and
5. The out-of-state licensee does not transfer or dispose of radioactive material possessed or used under the general license provided in this Section except by transfer to a person:
 - a. Specifically licensed by the Agency, or by the U.S. Nuclear Regulatory Commission to receive the radioactive material; or
 - b. Exempt under R12-1-303(A).
- B.** Notwithstanding the provisions of subsection (A)(1), this subsection grants a general license to manufacture, install, transfer, demonstrate, or service a device described in R12-1-306(A)(1) to any person who holds a specific license issued by the U.S. Nuclear Regulatory Commission, Licensing State, or an Agreement State authorizing the same activities within areas subject to the jurisdiction of the licensing body, provided that:
 1. The person files a report with the Agency within 30 days after the end of each calendar quarter in which any device is transferred to or installed in this State. Each report shall identify the general licensee to whom the device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device;
 2. The device has been manufactured, labeled, installed, and serviced according to the applicable provisions of the specific license issued to the person by the U.S. Nuclear Regulatory Commission or an Agreement State;
 3. The person entering the state ensures that any labels required to be affixed to the device under rules of the authority which licensed manufacture of the device bear the following statement: "Removal of this label is prohibited"; and
 4. The holder of the specific license furnishes a copy of the general license contained in R12-1-306(A)(1), or equivalent rules of the agency having jurisdiction over the manufacture or distribution of the device, to each general licensee to whom the licensee transfers the device or on whose premises the device is installed.
- C.** The Agency may withdraw, limit, or qualify the acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed under a license, upon determining that an action is necessary to prevent undue hazard to public health and safety, or property.
- D.** Before radioactive material can be used at a temporary job site within the state at any federal facility, a specific licensee shall determine the jurisdictional status of the job site. If the jurisdictional status is unknown, the specific licensee shall contact the controlling federal agency to determine whether the job site is under exclusive federal jurisdiction.
- E.** Before using radioactive material at a job site under exclusive federal jurisdiction, a specific licensee shall:
 1. Obtain authorization from the NRC; and
 2. Use the radioactive material in accordance with applicable NRC regulations and orders, and be able to demonstrate to the Agency that the correct license fee was paid to the NRC.
- F.** Before radioactive material can be used at a temporary job site in another state, a specific licensee shall obtain authorization from the state, if it is an Agreement State, or from the NRC for any non-Agreement State, either by filing for reciprocity or applying for a specific license.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended

effective December 20, 1985 (Supp. 85-6). Former Section R12-1-320 renumbered to R12-1-321, new Section R12-1-320 renumbered from R12-1-319 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-320 renumbered to R12-1-319; new Section R12-1-320 renumbered from R12-1-321 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-321. Repealed**Historical Note**

Former Rule Section C.201; Former Section R12-1-321 repealed, new Section R12-1-321 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-321 renumbered to R12-1-322, new Section R12-1-321 renumbered from R12-1-320 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-321 renumbered to R12-1-320; new Section R12-1-321 renumbered from R12-1-322 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-322. The Need for an Emergency Plan for Response to a Release of Radioactive Material

- A.** For purposes of this rule, "Emergency Plan" means a procedure that will be followed when an accident occurs involving licensed radioactive materials for which an offsite response may be needed from organizations, such as police, fire, or medical organizations.
- B.** Each application to possess radioactive materials in unsealed form, on foils or plated sources, or sealed in glass in excess of the quantities in Exhibit D, "Radioactive Material Quantities Requiring Consideration for an Emergency Plan" shall contain either:
 1. An evaluation showing that the maximum dose to a person off-site due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or 5 rems to the thyroid; or
 2. An emergency plan for responding to a release of radioactive material.
- C.** One or more of the following factors may be used to support an evaluation submitted under subsection (B)(1):
 1. The radioactive material is physically separated so that only a portion could be involved in an accident.
 2. All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;
 3. The release fraction in the respirable size range would be lower than the release fraction shown in Exhibit D due to the chemical or physical form of the material;
 4. The solubility of the radioactive material would reduce the dose received;
 5. Facility design or engineered safety features in the facility would cause the release fraction to be lower than shown in Exhibit D;
 6. Operating restrictions or procedures would prevent a release fraction as large as that shown in Exhibit D; or
 7. Other factors appropriate for the specific facility.

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- D. An emergency plan for responding to a release of radioactive material submitted under subsection (B)(2) shall include the following information:
1. A brief description of the licensee's facility and areas near the site that could expose a member of the public to a dose equal to or greater than the levels expressed in subsection (B)(1).
 2. An identification of each type of radioactive materials accident for which protective actions may be needed.
 3. A classification system for classifying accidents as alerts or site area emergencies.
 4. Identification of the means of detecting each type of accident in a timely manner.
 5. A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.
 6. A brief description of the methods and equipment to assess releases of radioactive materials.
 7. A brief description of the responsibilities of licensee personnel responsible for promptly notifying offsite response organizations and the Agency; also responsibilities for developing, maintaining, and updating the plan.
 8. A commitment to and a brief description of the means to promptly notify offsite response organizations and request off-site assistance, including medical assistance for the treatment of contaminated and injured onsite workers when appropriate. A control point shall be established. The notification and coordination shall be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the Agency immediately after notification of the appropriate off-site response organizations and not later than one hour after the licensee declares an emergency.
 9. A brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to off-site response organizations and to the Agency.
 10. A brief description of the frequency, performance objectives, and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical, and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.
 11. A brief description of the means of restoring the facility to a safe condition after an accident.
 12. Provisions for conducting quarterly communications checks with off-site response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with off-site response organizations shall include the verifying and updating of all necessary telephone numbers. The licensee shall invite off-site response organizations to participate in the biennial exercises. Their participation is not required. Exercises shall use accident scenarios postulated as most probable for the specific site and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise, using individuals without direct implementation responsibility for the plan. Critiques of exercises shall evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques shall be corrected.
 13. A certification that the applicant has met its responsibilities in A.R.S. §§ 26-341 through 26-353 (emergency Planning and Community Right-to-Know Act of 1986), if applicable to the applicant's activities at the proposed place of use of the radioactive material.
- E. The licensee shall allow 60 days for the off-site response organizations, expected to respond in case of an accident, to comment on the licensee's emergency plan before submitting it to the Agency. The licensee shall provide any comments received within the 60 days to the Agency with the emergency plan.

Historical Note

Former Section R12-1-322 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-322 renumbered from R12-1-321 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-322 renumbered to R12-1-321; new Section R12-1-322 renumbered from R12-1-323 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-323. Financial Assurance and Recordkeeping for Decommissioning

- A. For purposes of terminating specific licensed activities:
1. "Decommissioning" means to remove a radioactive material use facility safely from service and to reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the radioactive material use license.
 2. "Byproduct material" as used in 10 CFR 30, means "radioactive material" which is defined in A.R.S. § 30-651.
 3. "Facility" means the entire site of radioactive material use, or any separate building or outdoor area where it is used.
 4. "Appendix B to Part 30" as used in 10 CFR 30, means Appendix E in 12 A.A.C. 1, Article 4.
 5. "Financial security" means having a net worth of not less than \$10,000.
- B. When applying, each non-government applicant for a specific license that authorizes the possession and use of radioactive material, and each non-government holder of a license to possess and use radioactive material issued before the effective date of this Section, shall submit to the Agency a decommissioning funding plan or certification of financial security, as required in A.R.S. § 30-672(H). A licensee required to meet the requirements in subsection (C) is exempt from the requirements in this subsection.
- C. When applying, each applicant for a specific license that authorizes the possession and use of radioactive material, and each holder of a license to possess and use radioactive material issued before the effective date of this Section, shall submit to the Agency a decommissioning funding plan or certification of financial assurance that meets the requirements in 10 CFR 30.35, 40.36, and 70.25, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. Each decommissioning funding plan shall be submitted to the Agency for review and approval and shall contain:
1. A detailed cost estimate for decommissioning, in an amount reflecting:
 - a. The cost of an independent contractor to perform all decommissioning activities;

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- b. The cost of meeting the R12-1-452(B) criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of R12-1-453(C), the cost estimate may be based on meeting the R12-1-453(C) criteria;
 - c. The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination; and
 - d. An adequate contingency factor.
2. Identification of and justification for using the key assumptions contained in the DCE;
 3. A description of the method of assuring funds for decommissioning from subsection (F), including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;
 4. A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and
 5. An original signed copy of the financial instrument obtained to satisfy the requirements of subsection (F) unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning).
- D.** Each licensee required to provide financial assurance for decommissioning a radioactive material facility under this Section shall maintain records of information important to the safe and effective decommissioning of the facility in an identified location until the license is terminated by the Agency. The licensee shall maintain the following records during the decommissioning process:
1. Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, and site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. The licensee shall keep records identifying the involved radionuclides and associated quantities, forms, and concentrations.
 2. As-built drawings showing modifications of structures and equipment in restricted areas where radioactive materials are used and stored, and locations of possible inaccessible contamination. If drawings are not available, the licensee shall provide appropriate records describing each location of possible contamination.
 3. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.
- E.** Decommissioning procedures:
1. Upon expiration or termination of principal activities a licensee shall notify the Agency in writing whether the licensee is discontinuing licensed activities. The licensee shall begin decommissioning its facility within 60 days after the Agency receives notice of the decision to permanently terminate principal activities, or within 12 months after receipt of notice, submit to the Agency a decommissioning plan, as prescribed in 10 CFR 30.36(g)(1), 40.42(g)(1), and 70.38(g)(1), revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The licensee shall begin decommissioning upon approval of the plan if the license has expired or no licensed activities have been conducted at the licensee's facility for a period of 24 months.
2. In addition to the notification requirements in subsection (E)(1), the licensee shall maintain in effect all decommissioning financial assurances required by this Section. The financial assurances shall be increased or may be decreased as appropriate to cover the cost estimate established for decommissioning in subsection (E)(1). The licensee may reduce the amount of the financial assurance following approval of the decommissioning plan, provided the radiological hazard is decreasing and the licensee has the approval of the Agency.
 3. The Agency shall extend the time periods established in subsection (E)(1) if a new time period is in the best interest of public health and safety.
 - a. The licensee shall submit a request for an extension no later than 30 days after the Agency receives the notice required in subsection (E)(1).
 - b. If a licensee has requested an extension, the licensee is not required to commence decommissioning activities required in subsection (E)(1), until the Agency has made a determination on the request submitted to the Agency under subsection (E)(3)(a).
 4. Except as provided in subsection (E)(5), the licensee shall complete decommissioning of a facility as soon as practicable but no later than 24 months following the initiation of decommissioning; and except as provided in subsection (E)(5), when decommissioning involves the entire facility, the licensee shall request license termination as soon as practicable but no later than 24 months following initiation of decommissioning.
 5. The Agency shall approve a request for an alternate schedule for completion of decommissioning and license termination if the Agency determines that the alternative is warranted by consideration of the conditions specified in 10 CFR 30.36(i), 40.42(i), and 70.38(i), revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 6. As a final step in decommissioning, the licensee shall meet the requirements specified in 10 CFR 30.36(j), 40.42(j), and 70.38(j), revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- F.** Each person licensed under this Article shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. Before licensed activities are transferred or assigned in accordance with R12-1-318, licensees shall transfer all records described in this paragraph to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Agency considers important to decommissioning consists of:
1. Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known infor-

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- mation on identification of involved nuclides, quantities, forms, and concentrations.
2. As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.
 3. Except for areas containing depleted uranium used only for shielding or as penetrators in unused munitions, a list contained in a single document and updated every 2 years, of the following:
 - a. All areas designated and formerly designated as restricted areas as defined under R12-1-102;
 - b. All areas outside of restricted areas that require documentation under R12-1-323(F)(1);
 - c. All areas outside of restricted areas where current and previous wastes have been buried as documented under R12-1-441; and
 - d. All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in R12-1-451, or R12-1-452; or apply for approval for disposal under R12-1-435.
 4. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.
- G.** In providing financial assurance under this section, each licensee shall use the financial assurance funds only for decommissioning activities and each licensee shall monitor the balance of funds held to account for market variations. The licensee shall replenish the funds, and report such actions to the Agency, as follows:
1. If, at the end of a calendar quarter, the fund balance is below the amount necessary to cover the cost of decommissioning, but is not below 75 percent of the cost, the licensee shall increase the balance to cover the cost, and shall do so within 30 days after the end of the calendar quarter.
 2. If, at any time, the fund balance falls below 75 percent of the amount necessary to cover the cost of decommissioning, the licensee shall increase the balance to cover the cost, and shall do so within 30 days of the occurrence.
 3. Within 30 days of taking the actions required by subsection (G)(1) or (G)(2), the licensee shall provide a written report of such actions to the Director of the Agency, and state the new balance of the fund.
- H.** The financial instrument must include the licensee's name, license number, and docket number, and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments to the Agency reflecting such changes. The financial instrument submitted must be a signed original or signed original duplicate, except where a copy of the signed original is specifically permitted. Financial assurance for decommissioning must be provided by one or more of the following methods:
1. Prepayment. Prepayment is the deposit before the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment must be made into a trust account, and the trustee and the trust must be acceptable to the Agency.
 2. A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are approved by the Agency. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are approved by the Agency. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are approved by the Agency. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are approved by the Agency. Except for an external sinking fund, a parent company guarantee or a guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section. A guarantee by the applicant or licensee may not be used in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:
 - a. The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Agency, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face-value amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Agency within 30 days after receipt of notification of cancellation.
 - b. The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Agency. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.
 - c. The surety method or insurance must remain in effect until the Agency has terminated the license.
 3. An external sinking fund in which deposits are made at least annually, coupled with a surety method, insurance, or other guarantee method, the value of which may reduce by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund must be in the form of a trust. If the other guarantee method is used, no surety or

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insurance may be combined with the external sinking fund. The surety, insurance, or other guarantee provisions must be as stated in subsection (H)(2).

4. In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning, and indicating that funds for decommissioning will be obtained when necessary.
5. When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

Historical Note

Former Section R12-1-323 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-323 adopted effective February 18, 1994 (Supp. 94-1). Former Section R12-1-323 renumbered to R12-1-322; new Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-324. Public Notification and Public Participation

Upon the receipt of a license termination plan (LTP) or decommissioning plan from a licensee, or a proposal by a licensee for decommissioning of a site in accordance with R12-1-452(C) and (D) or for other events when the Agency deems a notice to be in the public interest, the Agency shall:

1. Notify and solicit comments from:
 - a. State and local governments and any Indian Nation or other indigenous people who have legal rights that could be affected by the decommissioning, and
 - b. The Arizona Department of Environmental Quality for cases in which the licensee proposes to decommission a site in accordance with R12-1-452(D).
2. Publish the notice in the *Arizona Administrative Register* and use other methods of publication such as local newspapers, letters to local organizations, or any other method that is reasonably calculated to provide notice, and solicit comments from affected parties.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). New Section made by final rulemaking at 10 A.A.R. 4588, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-325. Timeliness in Decommissioning Facilities

- A. "Principal activities," as used in this Section, means activities authorized by the license that are essential to achieving the purposes for which the license was issued or amended. Storage, during which licensed material is not accessed for use, or disposal and other activities incidental to decontamination or decommissioning are not principal activities.
- B. Each specific license revoked by the Agency expires at midnight on the date of the Agency's final determination to revoke the license, the expiration date stated in the determination, or as otherwise provided by Agency order.
- C. Each specific license continues in effect, beyond the expiration date if necessary, with respect to possession of radioactive material, until the Agency notifies the licensee in writing that the license is terminated. During this time, the licensee shall:
 1. Limit actions involving radioactive material to those related to decommissioning;

2. Continue to control entry to restricted areas until they are suitable for release in accordance with NRC requirements; and
3. Pay the applicable annual fee for the license category listed in R12-1-1306.

- D. Within 60 days of the occurrence of any of the following, each licensee shall notify the Agency in writing of the occurrence and either begin decommissioning its site, or any separate building or outdoor area that contains residual radioactivity, so that the building or outdoor area is suitable for release in accordance with Agency requirements, or submit within 12 months of notification a decommissioning plan, if required by R12-1-323, and begin decommissioning upon approval of that plan if:
 1. The license expires in accordance with subsection (B) or R12-1-314, unless the licensee submits a renewal application in accordance with R12-1-315;
 2. The licensee decides to permanently terminate principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements;
 3. No principal activities under the license have been conducted for a period of 24 months; or
 4. No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements.

1. The license expires in accordance with subsection (B) or R12-1-314, unless the licensee submits a renewal application in accordance with R12-1-315;

2. The licensee decides to permanently terminate principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements;

3. No principal activities under the license have been conducted for a period of 24 months; or
4. No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements.

2. The licensee decides to permanently terminate principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements;
3. No principal activities under the license have been conducted for a period of 24 months; or
4. No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). New Section made by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-326. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-327. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-328. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-329. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-330. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-331. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-332. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-333. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

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R12-1-334. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-335. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-336. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-337. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-338. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-339. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-340. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-341. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-342. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-343. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-344. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-345. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-346. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-347. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-348. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

Exhibit A. Exempt Concentrations

Element (atomic number)	Isotope	Column I Gas Concentration ($\mu\text{Ci/ml}$) ^{1/}	Column II Liquid and Solid Concentration ($\mu\text{Ci/ml}$) ^{2/}
Antimony (51)	Sb-122		3X10 ⁻⁴
	Sb-124		2X10 ⁻⁴
	Sb-125		1X10 ⁻³
Argon (18)	Ar-37	1X10 ⁻³	
	Ar-41	4X10 ⁻⁷	
Arsenic (33)	As-73		5X10 ⁻³
	As-74		5X10 ⁻⁴
	As-76		2X10 ⁻⁴
	As-77		8X10 ⁻⁴
Barium (56)	Ba-131		2X10 ⁻³
	Ba-140		3X10 ⁻⁴
Beryllium (4)	Be-7		2X10 ⁻²
Bismuth (83)	Bi-206		4X10 ⁻⁴
Bromine (35)	Br-82	4X10 ⁻⁷	3X10 ⁻³
Cadmium (48)	Cd-109		2X10 ⁻³
	Cd-115m		3X10 ⁻⁴
	Cd-115		3X10 ⁻⁴
Calcium (20)	Ca-45		9X10 ⁻⁵
	Ca-47		5X10 ⁻⁴
Carbon (6)	C-14	1X10 ⁻⁶	8X10 ⁻³
Cerium (58)	Ce-141		9X10 ⁻⁴
	Ce-143		4X10 ⁻⁴

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	Ce-144		1X10 ⁻⁴
Cesium (55)	Cs-131		2X10 ⁻²
	Cs-134m		6X10 ⁻²
	Cs-134		9X10 ⁻⁵
Chlorine (17)	Cl-38	9X10 ⁻⁷	4X10 ⁻³
Chromium (24)	Cr-51		2X10 ⁻²
Cobalt (27)	Co-57		5X10 ⁻³
	Co-58		1X10 ⁻³
	Co-60		5X10 ⁻⁴
Copper (29)	Cu-64		3X10 ⁻³
Dysprosium (66)	Dy-165		4X10 ⁻³
	Dy-166		4X10 ⁻⁴
Erbium (68)	Er-169		9X10 ⁻⁴
	Er-171		1X10 ^v
Europium (63)	Eu-152 (T _r =9.2 h)		6X10 ⁻⁴
	Eu-155		2X10 ⁻³
Fluorine (9)	F-18	2X10 ⁻⁶	8X10 ⁻³
Gadolinium (64)	Gd-153		2X10 ⁻³
	Gd-159		8X10 ⁻⁴
Gallium (31)	Ga-72		4X10 ⁻⁴
Germanium (32)	Ge-71		2X10 ⁻²
Gold (79)	Au-196		2X10 ⁻³
	Au-198		5X10 ⁻⁴
	Au-199		2X10 ⁻³
Hafnium (72)	Hf-181		7X10 ⁻⁴
Hydrogen (1)	H-3	5X10 ⁻⁶	3X10 ⁻²
Indium (49)	In-113m		1X10 ⁻²
	In-114m		2X10 ⁻⁴
Iodine	I-126	3X10 ⁻⁹	2X10 ⁻⁵
	I-131	3X10 ⁻⁹	2X10 ⁻⁵
	I-132	8X10 ⁻⁸	6X10 ⁻⁴
	I-133	1X10 ⁻⁸	7X10 ⁻⁵
	I-134	2X10 ⁻⁷	1X10 ⁻³
Iridium (77)	Ir-190		2X10 ⁻³
	Ir-192		4X10 ⁻⁴
	Ir-194		3X10 ⁻⁴
Iron (26)	Fe-55		8X10 ⁻³
	Fe-59		6X10 ⁻⁴
Krypton (36)	Kr-85m	1X10 ⁻⁶	
	Kr-85	3X10 ⁻⁶	
Lanthanum (57)	La-140		2X10 ⁻⁴
Lead (82)	Pb-203		4X10 ⁻³
Lutetium (71)	Lu-177		1X10 ⁻³
Manganese (25)	Mn-52		3X10 ⁻⁴
	Mn-54		1X10 ⁻³
	Mn-56		1X10 ⁻³
Mercury (80)	Hg-197m		2X10 ⁻³
	Hg-197		3X10 ⁻³
	Hg-203		2X10 ⁻⁴
Molybdenum (42)	Mo-99		2X10 ⁻³
Neodymium (60)	Nd-147		6X10 ⁻⁴
	Nd-149		3X10 ⁻³

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Nickel (28)	Ni-65		1×10^{-3}
Niobium (Columbium) (41)	Nb-95		1×10^{-3}
	Nb-97		9×10^{-3}
Osmium (76)	Os-185		7×10^{-4}
	Os-191m		3×10^{-2}
	Os-191		2×10^{-3}
	Os-193		6×10^{-4}
Palladium (46)	Pd-103		3×10^{-3}
	Pd-109		9×10^{-4}
Phosphorus (15)	P-32		2×10^{-4}
Platinum (78)	Pt-191		1×10^{-3}
	Pt-193m		1×10^{-2}
	Pt-197m		1×10^{-2}
	Pt-197		1×10^{-3}
Potassium (19)	K-42		3×10^{-3}
Praseodymium (59)	Pr-142		3×10^{-4}
	Pr-143		5×10^{-4}
Promethium (61)	Pm-147		2×10^{-3}
	Pm-149		4×10^{-4}
Rhenium (75)	Re-183		6×10^{-3}
	Re-186		9×10^{-4}
	Re-188		6×10^{-4}
Rhodium (45)	Rh-103m		1×10^{-1}
	Rh-105		1×10^{-3}
Rubidium (37)	Rb-86		7×10^{-4}
Ruthenium (44)	Ru-97		4×10^{-3}
	Ru-103		8×10^{-4}
	Ru-105		1×10^{-3}
	Ru-106		1×10^{-4}
Samarium (62)	Sm-153		8×10^{-4}
Scandium (21)	Sc-46		4×10^{-4}
	Sc-47		9×10^{-4}
	Sc-48		3×10^{-4}
Selenium (34)	Se-75		3×10^{-3}
Silicon (14)	Si-31		9×10^{-3}
Silver (47)	Ag-105		1×10^{-3}
	Ag-110m		3×10^{-4}
	Ag-111		4×10^{-4}
Sodium (11)	Na-24		2×10^{-3}
Strontium (38)	Sr-85		1×10^{-3}
	Sr-89		1×10^{-4}
	Sr-91		7×10^{-4}
	Sr-92		7×10^{-4}
Sulfur (16)	S-35	9×10^{-8}	6×10^{-4}
Tantalum (73)	Ta-182		4×10^{-4}
Technetium (43)	Tc-96m		1×10^{-1}
	Tc-96		1×10^{-3}
Tellurium (52)	Te-125m		2×10^{-3}
	Te-127m		6×10^{-4}
	Te-127		3×10^{-3}
	Te-129m		3×10^{-4}
	Te-131m		6×10^{-4}
	Te-132		3×10^{-4}

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Terbium (65)	Tb-160		4X10 ⁻⁴
Thallium (81)	Tl-200		4X10 ⁻³
	Tl-201		3X10 ⁻³
	Tl-202		1X10 ⁻³
	Tl-204		1X10 ⁻³
Thulium (69)	Tm-170		5X10 ⁻⁴
	Tm-171		5X10 ⁻³
Tin (50)	Sn-113		9X10 ⁻⁴
	Sn-125		2X10 ⁻⁴
Tungsten (Wolfram) (74)	W-181		4X10 ⁻³
	W-187		7X10 ⁻⁴
Vanadium (23)	V-48		3X10 ⁻⁴
Xenon (54)	Xe-131m	4X10 ⁻⁶	
	Xe-133	3X10 ⁻⁶	
	Xe-135	1X10 ⁻⁶	
Ytterbium (70)	Yb-175		1X10 ⁻³
Yttrium (39)	Y-90		2X10 ⁻⁴
	Y-91m		3X10 ⁻²
	Y-91		3X10 ⁻⁴
	Y-92		6X10 ⁻⁴
	Y-93		3X10 ⁻⁴
Zinc (30)	Zn-65		1X10 ⁻³
	Zn-69m		7X10 ⁻⁴
	Zn-69		2X10 ⁻²
Zirconium (40)	Zr-95		6X10 ⁻⁴
	Zr-97		2X10 ⁻⁴

(See notes at end of appendix)

Beta and/or gamma emitting
radioactive material not
listed above with half-life
less than three years

1X10⁻¹⁰1X10⁻⁶

NOTE 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Schedule A the activity stated is that of the parent isotope and takes into account the daughters.

^{1/} Values are given in Column I only for those materials normally used as gases

^{2/} $\mu\text{Ci/gm}$ are for solids

NOTE 2: For purposes of Section 303 where there is involved a combination of isotopes, the limit for the combination should be derived as follows: Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule A for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

EXAMPLE:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

Historical Note

Appendix A repealed, Schedule A adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

Exhibit B. Exempt Quantities

Material	Microcuries	Barium-133 (Ba-133)	10
Antimony-122 (Sb-122)	100	Barium-140 (Ba-140)	10
Antimony-124 (Sb-124)	10	Bismuth-210 (Bi-210)	1
Antimony-125 (Sb-125)	10	Bromine-82 (Br-82)	10
Arsenic-73 (As-73)	100	Cadmium-109 (Cd-109)	10
Arsenic-74 (As-74)	10	Cadmium-115m (Cd-115m)	10
Arsenic-76 (As-76)	10	Cadmium-115 (Cd-115)	100
Arsenic-77 (As-77)	100	Calcium-45 (Ca-45)	10
Barium-131 (Ba-131)	10	Calcium-47 (Ca-47)	10

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Carbon-14 (C-14)	100	Krypton-87 (Kr-87)	10
Cerium-141 (Ce-141)	100	Lanthanum-140 (La-140)	10
Cerium-143 (Ce-143)	100	Lutetium-177 (Lu-177)	100
Cerium-144 (Ce-144)	1	Manganese-52 (Mn-52)	10
Cesium-129 (Cs-129)	100	Manganese-54 (Mn-54)	10
Cesium-131 (Cs-131)	1,000	Manganese-56 (Mn-56)	10
Cesium-134m (Cs-134m)	100	Mercury-197m (Hg-197m)	100
Cesium-134 (Cs-134)	1	Mercury-197 (Hg-197)	100
Cesium-135 (Cs-135)	10	Mercury-203 (Hg-203)	10
Cesium-136 (Cs-136)	10	Molybdenum-99 (Mo-99)	100
Cesium-137 (Cs-137)	10	Neodymium-147 (Nd-147)	100
Chlorine-36 (Cl-36)	10	Neodymium-149 (Nd-149)	100
Chlorine-38 (Cl-38)	10	Nickel-59 (Ni-59)	100
Chromium-51 (Cr-51)	1,000	Nickel-63 (Ni-63)	10
Cobalt-57 (Co-57)	100	Nickel-65 (Ni-65)	100
Cobalt-58m (Co-58m)	10	Niobium-93m (Nb-93m)	10
Cobalt-58 (Co-58)	10	Niobium-95 (Nb-95)	10
Cobalt-60 (Co-60)	1	Niobium-97 (Nb-97)	10
Copper-64 (Cu-64)	100	Osmium-185 (Os-185)	10
Dysprosium-165 (Dy-165)	10	Osmium-191m (Os-191m)	100
Dysprosium-166 (Dy-166)	100	Osmium-191 (Os-191)	100
Erbium-169 (Er-169)	100	Osmium-193 (Os-193)	100
Erbium-171 (Er-171)	100	Palladium-103 (Pd-103)	100
Europium-152 (Eu-152) (9.2 h)	100	Palladium-109 (Pd-109)	100
Europium-152 (Eu-152) (13 yr)	1	Phosphorus-32 (P-32)	10
Europium-154 (Eu-154)	1	Platinum-191 (Pt-191)	100
Europium-155 (Eu-155)	10	Platinum-193m (Pt-193m)	100
Fluorine-18 (F-18)	1,000	Platinum-193 (Pt-193)	100
Gadolinium-153 (Gd-153)	10	Platinum-197m (Pt-197m)	100
Gadolinium-159 (Gd-159)	100	Platinum-197 (Pt-197)	100
Gallium-67 (Ga-67)	100	Polonium-210 (Po-210)	0.1
Gallium-72 (Ga-72)	10	Potassium-42 (K-42)	10
Germanium-68 (Ge-68)	10	Potassium-43 (K-43)	10
Germanium-71 (Ge-71)	100	Praseodymium-142 (Pr-142)	100
Gold-195 (Au-195)	10	Praseodymium-143 (Pr-143)	100
Gold-198 (Au-198)	100	Promethium-147 (Pm-147)	10
Gold-199 (Au-199)	100	Promethium-149 (Pm-149)	10
Hafnium-181 (Hf-181)	10	Rhenium-186 (Re-186)	100
Holmium-166 (Ho-166)	100	Rhenium-188 (Re-188)	100
Hydrogen-3 (H-3)	1,000	Rhodium-103m (Rh-103m)	100
Indium-111 (In-111)	100	Rhodium-105 (Rh-105)	100
Indium-113m (In-113m)	100	Rubidium-81 (Rb-81)	10
Indium-114m (In-114m)	10	Rubidium-86 (Rb-86)	10
Indium-115m (In-115m)	100	Rubidium-87 (Rb-87)	10
Indium-115 (In-115)	10	Ruthenium-97 (Ru-97)	100
Iodine-123 (I-123)	100	Ruthenium-103 (Ru-103)	10
Iodine-125 (I-125)	1	Ruthenium-105 (Ru-105)	10
Iodine-126 (I-126)	1	Ruthenium-106 (Ru-106)	1
Iodine-129 (I-129)	0.1	Samarium-151 (Sm-151)	10
Iodine-131 (I-131)	1	Samarium-153 (Sm-153)	100
Iodine-132 (I-132)	10	Scandium-46 (Sc-46)	10
Iodine-133 (I-133)	1	Scandium-47 (Sc-47)	100
Iodine-134 (I-134)	10	Scandium-48 (Sc-48)	10
Iodine-135 (I-135)	10	Selenium-75 (Se-75)	10
Iridium-192 (Ir-192)	10	Silicon-31 (Si-31)	100
Iridium-194 (Ir-194)	100	Silver-105 (Ag-105)	10
Iron-52 (Fe-52)	10	Silver-110m (Ag-110m)	1
Iron-55 (Fe-55)	100	Silver-111 (Ag-111)	100
Iron-59 (Fe-59)	10	Sodium-22 (Na-22)	10
Krypton-85 (Kr-85)	100	Sodium-24 (Na-24)	10

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Strontium-85 (Sr-85)	10	Tin-113 (Sn-113)	10
Strontium-89 (Sr-89)	1	Tin-125 (Sn-125)	10
Strontium-90 (Sr-90)	0.1	Tungsten-181 (W-181)	10
Strontium-91 (Sr-91)	10	Tungsten-185 (W-185)	10
Strontium-92 (Sr-92)	10	Tungsten-187 (W-187)	100
Sulfur-35 (S-35)	100	Vanadium-43 (V-43)	10
Tantalum-182 (Ta-182)	10	Xenon-131m (Xe-131m)	1,000
Technetium-96 (Tc-96)	10	Xenon-133 (Xe-133)	100
Technetium-97m (Tc-97m)	100	Xenon-135 (Xe-135)	100
Technetium-97 (Tc-97)	100	Ytterbium-175 (Yb-175)	100
Technetium-99m (Tc-99m)	100	Yttrium-87 (Y-87)	10
Technetium-99 (Tc-99)	10	Yttrium-88 (Y-88)	10
Tellurium-125m (Te-125m)	10	Yttrium-90 (Y-90)	10
Tellurium-127m (Te-127m)	10	Yttrium-91 (Y-91)	10
Tellurium-127 (Te-127)	100	Yttrium-92 (Y-92)	100
Tellurium-129m (Te-129m)	10	Yttrium-93 (Y-93)	100
Tellurium-129 (Te-129)	100	Zinc-65 (Zn-65)	10
Tellurium-131m (Te-131m)	10	Zinc-69m (Zn-69m)	100
Tellurium-132 (Te-132)	10	Zinc-69 (Zn-69)	1,000
Terbium-160 (Tb-160)	10	Zirconium-93 (Zr-93)	10
Thallium-200 (Tl-200)	100	Zirconium-95 (Zr-95)	10
Thallium-201 (Tl-201)	100	Zirconium-97 (Zr-97)	10
Thallium-202 (Tl-202)	100	Any radionuclide material not	
Thallium-204 (Tl-204)	10	listed above other than alpha-	
Thulium-170 (Tm-170)	10	emitting radioactive material	0.1
Thulium-171 (Tm-171)	10		

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Exhibit B amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

Exhibit C. Limits for Class B and C Broad Scope Licenses (R12-1-310)

<u>Radioactive Material</u>	<u>Col. I</u> <u>curies</u>	<u>Col. II</u> <u>curies</u>		
Antimony-122	1	0.01	Chlorine-38	100 1.
Antimony-124	1	0.01	Chromium-51	100 1.
Antimony-125	1	0.01	Cobalt-57	10 0.1
Arsenic-73	10	0.1	Cobalt-58m	100 1.
Arsenic-74	1	0.01	Cobalt-58	1 0.01
Arsenic-76	1	0.01	Cobalt-60	0.1 0.001
Arsenic-77	10	0.1	Copper-64	10 0.1
Barium-131	10	0.1	Dysprosium-165	100 1.
Barium-140	1	0.01	Dysprosium-166	10 0.1
Beryllium-7	10	0.1	Erbium-169	10 0.1
Bismuth-210	0.1	0.001	Erbium-171	10 0.1
Bromine-82	10	0.1	Europium-152 (9.2 h)	10 0.1
Cadmium-109	1	0.01	Europium-152 (13 yr)	0.1 0.001
Cadmium-115m	1	0.01	Europium-154	0.1 0.001
Cadmium-115	10	0.1	Europium-155	1 0.01
Calcium-45	1	0.01	Fluorine-18	100 1.
Calcium-47	10	0.1	Gadolinium-153	1 0.1
Carbon-14	100	1.	Gadolinium-159	10 0.1
Cerium-141	10	0.1	Gallium-72	10 0.1
Cerium-143	10	0.1	Germanium-71	100 1.
Cerium-144	0.1	0.001	Gold-198	10 0.1
Cesium-131	100	1.	Gold-199	10 0.1
Cesium-134m	100	1.	Hafnium-181	1 0.1
Cesium-134	0.1	0.001	Holmium-166	10 0.1
Cesium-135	1	0.01	Hydrogen-3	100 1.
Cesium-136	10	0.1	Indium-113m	100 1.
Cesium-137	0.1	0.001	Indium-114m	1 0.1
Chlorine-36	1	0.01	Indium-115m	100 1.
			Indium-115	1 0.1
			Iodine-125	0.1 0.001
			Iodine-126	0.1 0.001

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Iodine-129	0.1	0.001	Scandium-47	10	0.1
Iodine-131	0.1	0.001	Scandium-48	1	0.01
Iodine-132	10	0.1	Selenium-75	1	0.01
Iodine-133	1	0.1	Silicon-31	10	0.1
Iodine-134	10	0.1	Silver-105	1	0.01
Iodine-135	1	0.1	Silver-110m	0.1	0.001
Iridium-192	1	0.1	Silver-111	10	0.1
Iridium-194	10	0.1	Sodium-22	0.1	0.001
Iron-55	10	0.1	Sodium-24	1	0.01
Iron-59	1	0.1	Strontium-85	1,000	10
Krypton-85	100	1.	Strontium-85	1	0.01
Krypton-87	10	0.1	Strontium-89	1	0.01
Lanthanum-140	1	0.1	Strontium-90	0.01	0.0001
Lutetium-177	10	0.1	Strontium-91	10	0.1
Manganese-52	1	0.1	Strontium-92	10	0.1
Manganese-54	1	0.1	Sulfur-35	100	0.1
Manganese-56	10	0.1	Tantalum-182	1	0.01
Mercury-197m	10	0.1	Technetium-96	10	0.1
Mercury-197	10	0.1	Technetium-97m	10	0.1
Mercury-203	1	0.1	Technetium-97	10	0.1
Molybdenum-99	10	0.1	Technetium-99m	100	1.
Neodymium-147	10	0.1	Technetium-99	1	0.01
Neodymium-149	10	0.1	Tellurium-125m	1	0.01
Nickel-59	10	0.1	Tellurium-127m	1	0.01
Nickel-63	1	0.1	Tellurium-127	10	0.1
Nickel-65	10	0.1	Tellurium-129m	1	0.01
Niobium-93m	1	0.1	Tellurium-129	100	1.
Niobium-95	1	0.1	Tellurium-131m	10	0.1
Niobium-97	100	1.	Tellurium-132	1	0.01
Osmium-185	1	0.1	Terbium-160	1	0.01
Osmium-191m	100	1.	Thallium-200	10	0.1
Osmium-191	10	0.1	Thallium-201	10	0.1
Osmium-193	10	0.1	Thallium-202	10	0.1
Palladium-103	10	0.1	Thallium-204	1	0.01
Palladium-109	10	0.1	Thulium-170	1	0.01
Phosphorus-32	1	0.01	Thulium-171	1	0.01
Platinum-191	10	0.1	Tin-113	1	0.01
Platinum-193m	100	1.	Tin-125	1	0.01
Platinum-193	10	0.1	Tungsten-181	1	0.01
Platinum-197m	100	1.	Tungsten-185	1	0.01
Platinum-197	10	0.1	Tungsten-197	10	0.1
Polonium-210	0.01	0.0001	Vanadium-43	1	0.01
Potassium-42	1	0.01	Xenon-131m	1,000	10
Praseodymium-142	10	0.1	Xenon-133	100	1.
Praseodymium-143	10	0.1	Xenon-135	100	1.
Promethium-147	1	0.01	Ytterbium-175	10	0.1
Promethium-149	10	0.1	Yttrium-90	1	0.01
Radium-226	0.01	0.0001	Yttrium-91	1	0.01
Rhenium-186	10	0.1	Yttrium-92	10	0.1
Rhenium-188	10	0.1	Yttrium-93	1	0.01
Rhodium-103m	1,000	10	Zinc-65	1	0.01
Rhodium-105	10	0.1	Zinc-69m	10	0.1
Rubidium-86	1	0.01	Zinc-69	100	1.
Rubidium-87	1	0.01	Zirconium-93	1	0.01
Ruthenium-97	100	1.	Zirconium-95	1	0.01
Ruthenium-103	1	0.01	Zirconium-97	1	0.01
Ruthenium-105	10	0.1	Any radioactive material		
Ruthenium-106	0.1	0.001	other than source material,		
Samarium-151	1	0.01	special nuclear material,		
Samarium-153	10	0.1	or alpha emitting radioactive		
Scandium-46	1	0.01	material not listed above.	0.1	0.001

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Schedule C repealed; new Exhibit C renumbered from Exhibit D and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

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Exhibit D. Radioactive Material Quantities Requiring Consideration for an Emergency Plan (R12-1-322)

<u>Radioactive Material</u>	<u>Release Fraction</u>	<u>Quantity (Ci)</u>
Actinium-228	0.001	4,000
Americium-241	.001	2
Americium-242	.001	2
Americium-243	.001	2
Antimony-124	.01	4,000
Antimony-126	.01	6,000
Barium-133	.01	10,000
Barium-140	.01	30,000
Bismuth-207	.01	5,000
Bismuth-210	.01	600
Cadmium-109	.01	1,000
Cadmium-113	.01	80
Calcium-45	.01	20,000
Californium-252	.001	9 (20 mg)
Carbon-14 (Non CO)	.01	50,000
Cerium-141	.01	10,000
Cerium-144	.01	300
Cesium-134	.01	2,000
Cesium-137	.01	3,000
Chlorine-36	.5	100
Chromium-51	.01	300,000
Cobalt-60	.001	5,000
Copper-64	.01	200,000
Curium-242	.001	60
Curium-243	.001	3
Curium-244	.001	4
Curium-245	.001	2
Europium-152	.01	500
Europium-154	.01	400
Europium-155	.01	3,000
Gadolinium-153	.01	5,000
Germanium-68	.01	2,000
Gold-198	.01	30,000
Hafnium-172	.01	400
Hafnium-181	.01	7,000
Holmium-166m	.01	100
Hydrogen-3	.5	20,000
Indium-114m	.01	1,000
Iodine-125	.5	10
Iodine-131	.5	10
Iridium-192	.001	40,000
Iron-55	.01	40,000
Iron-59	.01	7,000
Krypton-85	1.0	6,000,000
Lead-210	.01	8
Manganese-56	.01	60,000
Mercury-203	.01	10,000
Molybdenum-99	.01	30,000
Neptunium-237	.001	2
Nickel-63	.01	20,000
Niobium-94	.01	300
Phosphorus-32	.5	100
Phosphorus-33	.5	1,000
Polonium-210	.01	10
Potassium-42	.01	9,000
Promethium-145	.01	4,000
Promethium-147	.01	4,000
Radium-226	.001	100
Ruthenium-106	.01	200
Samarium-151	.01	4,000
Scandium-46	.01	3,000
Selenium-75	.01	10,000

Silver-110m	.01	1,000
Sodium-22	.01	9,000
Sodium-24	.01	10,000
Strontium-89	.01	3,000
Strontium-90	.01	90
Sulfur-35	.5	900
Technetium-99	.01	10,000
Technetium-99m	.01	400,000
Tellurium-127m	.01	5,000
Tellurium-129m	.01	5,000
Terbium-160	.01	4,000
Thulium-170	.01	4,000
Tin-113	.01	10,000
Tin-123	.01	3,000
Tin-126	.01	1,000
Titanium-44	.01	100
Vanadium-48	.01	7,000
Xenon-133	1.0	900,000
Yttrium-91	.01	2,000
Zinc-65	.01	5,000
Zirconium-93	.01	400
Zirconium-95	.01	5,000
Any other beta-gamma emitter	.01	10,000
Mixed fission products	.01	1,000
Mixed corrosion products	.01	10,000
Contaminated equipment		
beta-gamma	.001	10,000
Irradiated material, any form		
other than solid non-		
combustible	.01	1,000
Irradiated material, solid		
noncombustible	.001	10,000
Mixed radioactive waste,		
beta-gamma	.01	1,000
Packaged mixed waste, beta		
gamma	.001	10,000
Any other alpha emitter	.001	2
Contaminated equipment, alpha	.0001	20
Packaged waste, alpha	.0001	20

Combinations of radioactive materials listed above:

For combinations of radioactive materials, consideration of the need for an emergency plan is required if the sum of the ratios of the quantity of each radioactive material authorized to the quantity listed for that material in Exhibit D exceeds 1.

NOTE: Waste packaged in Type B containers does not require an emergency plan.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Former Schedule D renumbered to Exhibit C; new Exhibit D renumbered from Schedule E and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Exhibit D amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

Exhibit E. Application Information**1. Radioactive Material (RAM) Specific License Application Information**

An applicant shall provide the following information in a specific license application before a license is issued to the applicant. The Agency shall provide an application form to an applicant with a guide, when possible, to ensure that correct information is provided in the application:

Name and mailing address of applicant Use location

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Contact person	Telephone number
Users of RAM	Training of users
Radiation Safety Officer identity (RSO)	Duties of RSO
Description of RAM and uses	Description of radiation detection/measurement instruments and their calibration
Personnel monitoring	Bioassay program
Facility description	Survey program
Leak test program	Records management program
Instruction to personnel	Waste disposal program
Emergency procedures	Procedures for ordering, receiving, and opening packages
Description of animal use	Licensing fee provided with application
Copy of letter-of-intent to local governing body	Description of ALARA and quality management programs
Description of transportation procedures	Certifying signature
Legal structure of licensee's operation	
Other licensing requirements listed in: R12-1-310, R12-1-311, R12-1-312, R12-1-511, R12-1-703, and R12-1-1721	

2. Radioactive Material (RAM) General License Application Information

An applicant shall provide the following information on a registration certificate. The certificate will be validated and returned to the applicant if the information provided is complete.

Name and address	Telephone number
Where will the radioactive material be used	Address of use location
Description of radioactive material use	Date
Authorizing signature and printed name	Position of person signing the form

Historical Note

Adopted effective February 18, 1994 (Supp. 94-1). Former Schedule E renumbered to Exhibit D; new Exhibit adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

ARTICLE 4. STANDARDS FOR PROTECTION AGAINST IONIZING RADIATION

R12-1-401. Purpose

- A. Article 4 establishes standards for protection against ionizing radiation resulting from activities conducted according to licenses or registrations issued by the Agency. These rules are issued according to A.R.S. Title 30, Chapter 4, as amended.
- B. The requirements of Article 4 are designed to control the receipt, possession, use, transfer, and disposal of sources of radiation by any licensee or registrant so the total dose equivalent to an individual, including radiation exposure resulting from all sources of radiation other than radiation prescribed by a physician in the practice of medicine, radiation received while voluntarily participating in a medical research program, and background radiation, does not exceed the standards for protection against radiation prescribed in this Article. How-

ever, this Article does not limit actions that may be necessary to protect health and safety.

Historical Note

Former Rule Section D.1; Former Section R12-1-401 repealed, new Section R12-1-401 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-402. Scope

Except as specifically provided in other Articles of these rules, Article 4 applies to persons licensed or registered by the Agency to receive, possess, use, transfer, or dispose of sources of ionizing radiation.

Historical Note

Former Rule Section D.2; Former Section R12-1-402 repealed, new Section R12-1-402 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended subsection (A) effective June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-403. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

“Air-purifying respirator” means respiratory protective equipment with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

“ALI” means annual limit on intake, the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the Reference Man that would result in a committed effective dose equivalent of 0.05 Sv (5 rem) or a committed dose equivalent of 0.5 Sv (50 rem) to any individual organ or tissue. ALI values for intake by ingestion and by inhalation of selected radionuclides are given in Appendix B, Table I, Columns 1 and 2.

“Assigned protection factor” or “APF” means the expected workplace level of respirator protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

“Atmosphere-supplying respirator” means respiratory protective equipment that supplies the equipment user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

“Class” means a classification scheme for inhaled material according to the material’s rate of clearance from the lung. Materials are classified as D, W, or Y, which applies to a range of clearance half-times: for Class D, days, of less than 10 days, for Class W, weeks, from 10 to 100 days, and for Class Y, years, of greater than 100 days (see Introduction, Appendix B). For purposes of these rules, “lung class” and “inhalation class” are equivalent terms.

“Constraint” or “dose constraint” means a value above which specified licensee or registrant actions are required.

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“Critical group” means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

“DAC” means derived air concentration, the concentration of a given radionuclide in air which, if breathed by Reference Man for a working year of 2,000 hours under conditions of light work, results in an intake of one ALI. For purposes of these rules, the condition of light work is an inhalation rate of 1.2 cubic meters of air per hour for 2,000 hours in a year. DAC values are given in Appendix B, Table I, Column 3.

“DAC-hour” means derived air concentration-hour, the product of the concentration of radioactive material in air, expressed as a fraction or multiple of the derived air concentration for each radionuclide, and the time of exposure to that radionuclide, in hours. A licensee or registrant may take 2,000 DAC-hours to represent one ALI, equivalent to a committed effective dose equivalent of 0.05 Sv (5 rem).

“Declared pregnant woman” means a woman who has voluntarily informed the licensee or registrant in writing of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

“Decommission” means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license or release of the property under restricted conditions and the termination of the license.

“Demand respirator” means an atmosphere-supplying respiratory protective equipment that admits breathing air to the face piece only when a negative pressure is created inside the face piece by inhalation.

“Deterministic effect” (See “Nonstochastic effect”)

“Disposable respirator” means respiratory protective equipment for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent depletion, physical damage, or end-of-service-life renders it unsuitable for use. Examples of this type of device include a disposable half-mask respirator or a disposable, escape-only, self-contained breathing apparatus (SCBA).

“Distinguishable from background” means that the detectable concentration of a radionuclide is statistically greater than the background concentration of that radionuclide in the vicinity of a site or, in the case of structures, in similar materials using accepted measurement, survey, and statistical techniques.

“Dosimetry processor” means an individual or an organization that processes and evaluates individual monitoring devices in order to determine the radiation dose delivered to the monitoring devices.

“Filtering face piece (dust mask)” means a particulate respirator that operates under a negative pressure with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium, not equipped with elastomeric sealing surfaces and adjustable straps.

“Fit factor” means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

“Fit test” means the use of protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

“Helmet” means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

“Hood” means a respiratory inlet covering that completely covers the head, neck, and may also cover portions of the shoulders and torso.

“Inhalation class” (See “Class”)

“Loose-fitting face piece” means a respiratory inlet covering that is designed to form a partial seal with the face.

“Lung class” (See “Class”)

“Nationally tracked source” means a sealed source that contains a quantity equal to or greater than Category 1 or Category 2 levels of radioactive material listed in 10 CFR 20, Appendix E, revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. In this context sealed source does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, sub-assembly, fuel rod, or fuel pellet.

“Negative pressure respirator (tight fitting)” means respiratory protective equipment in which the air pressure inside the face piece is negative during inhalation with respect to the ambient air pressure outside the respirator.

“Nonstochastic effect” means a health effect, the severity of which varies with the dose and for which a threshold is believed to exist. Radiation-induced cataract formation is an example of a nonstochastic effect. For purposes of these rules, “deterministic effect” is an equivalent term and “threshold” means that which if not exceeded, poses no risk or likelihood of an effect to occur.

“Planned special exposure” means an infrequent exposure to radiation received while employed, but separate from and in addition to the annual occupational dose limits.

“Positive pressure respirator” means respiratory protective equipment in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

“Powered air-purifying respirator” or “PAPR” means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

“Pressure demand respirator” means a positive pressure, atmosphere-supplying respirator that admits breathing air to the face piece when the positive pressure is reduced inside the face piece by inhalation.

“Probabilistic effect” (See “Stochastic effect”)

“Qualitative fit test” or “QLFT” means a pass or fail fit test to assess the adequacy of respirator fit that relies on the individual’s response to the test agent.

“Quantitative fit test” or “QNFT” means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

“Reference Man” means a hypothetical aggregation of human physical and physiological characteristics determined by international consensus. These characteristics may be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base. A description of Reference Man is contained in the International Commission on Radiological Protection report, ICRP

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Publication 23, "Report of the Task Group on Reference Man," published in 1975 by Pergamon Press, incorporated by reference and on file with the Agency and the Office of the Secretary of State. This incorporation by reference contains no future editions or amendments.

"Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, or other media at a site, resulting from activities under a licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials that remain at the site because of routine or accidental release of radioactive material at the site or a previous burial at the site, even if the licensee complied with reagent provisions of 12 A.A.C. 1.

"Respiratory protective equipment" means an apparatus, such as a respirator, used to reduce an individual's intake of air-borne radioactive materials.

"Sanitary sewerage" means a system of public sewers for carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned or operated by the licensee or registrant.

"Self-contained breathing apparatus" or "SCBA" means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

"Stochastic effect" means a health effect that occurs randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose without a threshold. Hereditary effects and cancer incidence are examples of stochastic effects. For purposes of these rules, "probabilistic effect" is an equivalent term.

"Supplied-air respirator" or "SAR" or "airline respirator" means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

"Tight-fitting face piece" means a respiratory inlet covering that forms a complete seal with the face.

"User seal check" or "fit check" means an action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

"Very-high radiation area" means an area, accessible to individuals, in which radiation levels from radiation sources external to an individual's body could result in the individual receiving an absorbed dose in excess of 5 Gy (500 rad) in one hour at one meter from a radiation source or one meter from any surface that the radiation penetrates. (At very high doses received at high dose rates, units of absorbed dose, the gray and rad should be used, rather than units of dose equivalent, the sievert and rem).

"Weighting factor" w_T for an organ or tissue (T) means the proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of w_T are:

ORGAN DOSE WEIGHTING FACTORS	
Organ or Tissue	w_T
Gonads	0.25
Breast	0.15

Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder	0.30 ^a
Whole Body	1.00 ^b

^a 0.30 results from 0.06 for each of five "remainder" organs, excluding the skin and the lens of the eye, that receive the highest doses.

^b For the purpose of weighting the external whole body dose, for adding it to the internal dose, a single weighting factor, $w_T = 1.0$, has been specified. The use of other weighting factors for external exposure will be approved by the Agency on a case-by-case basis.

Historical Note

Former Rule Section D.3, Former Section R12-1-403 repealed, new Section R12-1-403 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-404. Units and Quantities

- A. Each licensee or registrant shall use the Standard International (SI) units becquerel, gray, sievert, and coulomb per kilogram, or the special units curie, rad, rem, and roentgen, including multiples and subdivisions, and shall clearly indicate the units of all quantities on records required by this Article.
- B. The licensee or registrant shall make a clear distinction among the quantities entered on the records required by this Article, such as, total effective dose equivalent, total organ dose equivalent, shallow dose equivalent, lens dose equivalent, deep dose equivalent, or committed effective dose equivalent.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-405. Form of Records

- A. A licensee or registrant shall ensure that each record required by this Article is legible throughout the specified retention period. The record shall be the original, a reproduced copy, or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. As an alternative the record may be stored in electronic media capable of producing legible records during the required retention period. Records, such as letters, drawings, and specifications, shall include all pertinent information, such as stamps, initials, and signatures. A licensee or registrant shall maintain adequate safeguards against tampering with and loss of records.
- B. In the records required by this Article, a licensee or registrant may record quantities in SI units in parentheses following each of the required units, curie, rad, and rem, and include multiples and subdivisions.

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- C. Notwithstanding subsection (B), the licensee or registrant shall ensure that information is recorded in the International System of Units (SI) or in SI and the units specified in subsection (B) on each shipment manifest as required in R12-1-439(A).
- D. A licensee or registrant shall make a clear distinction among the quantities entered on the records required by this Section (e.g., total effective dose equivalent, shallow-dose equivalent, lens dose equivalent, deep-dose equivalent, committed effective dose equivalent).

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-406. Implementation

Any existing license or registration condition that is more restrictive than this Article remains in force until amendment or renewal of the license or registration.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-407. Radiation Protection Programs

- A. Each licensee or registrant shall develop, document, and implement a radiation protection program sufficient to ensure compliance with the provisions of Article 4.
- B. The licensee or registrant shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and public doses that are as low as is reasonably achievable (ALARA).
- C. The licensee or registrant shall, at intervals not to exceed 12 months, review the radiation protection program content and implementation.
- D. To implement the ALARA requirements in subsection (B), and notwithstanding the requirements in R12-1-416, each licensee or registrant governed by A.A.C. Title 12, Chapter 1, Article 3 shall limit air emissions of radioactive material to the environment so that individual members of the public likely to receive the highest dose will not receive a total effective dose equivalent in excess of 0.1mSv (10 mrem) per year from the emissions. If a licensee or registrant subject to this requirement exceeds this limit, the licensee or registrant shall report the incident to the Agency, in accordance with R12-1-444, and take prompt corrective action to prevent additional violations.
- E. Records.
1. Each licensee or registrant shall maintain records of the radiation protection program, including:
 - a. The provisions of the program; and
 - b. Audits and other reviews of program content and implementation.
 2. A licensee or registrant shall retain the records required by subsection (E)(1)(a) for three years after the termination of the license or registration. The licensee or registrant shall retain the records required by subsection (E)(1)(b) for three years after the record is made.
 3. The following licensees and registrants are exempt from the record requirements contained in this subsection:
 - B6-General Medical
 - C9-Gas Chromatograph

C10-General Industrial
 D15-Possession Only
 E2-X-ray Machine class B
 E3-X-ray Machine class C

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-408. Occupational Dose Limits for Adults

- A. Each licensee or registrant shall control the occupational dose to individual adults, except for planned special exposures required in R12-1-413, to the following dose limits:
1. An annual limit, which is the more limiting of:
 - a. The total effective dose equivalent being equal to 0.05 Sv (5 rem): or
 - b. The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 0.5 Sv (50 rem).
 2. The annual limits to the lens of the eye, to the skin, and to the extremities which are:
 - a. A lens dose equivalent of 0.15 Sv (15 rem), and
 - b. A shallow dose equivalent of 0.5 Sv (50 rem) to the skin of the whole body or to the skin of any extremity.
- B. Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, shall be subtracted from the limits for planned special exposures that the individual may receive during the current year and during the individual's lifetime. See R12-1-413.
- C. The assigned deep-dose equivalent and shallow-dose equivalent are, for the portion of the body receiving the highest exposure, determined as follows:
1. The deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.
 2. If a protective apron is worn and monitoring is conducted as specified in R12-1-419(B), the effective dose equivalent for external radiation shall be determined as follows:
 - a. If only one individual monitoring device is used and it is located at the neck outside the protective apron, and the reported dose exceeds 25% of the limit specified in R12-1-408(A), the reported deep-dose equivalent value multiplied by 0.3 is the effective dose equivalent for external radiation; or
 - b. When individual monitoring devices are worn, both under the protective apron at the waist and outside the protective apron at the neck, the effective dose equivalent for external radiation is assigned the value of the sum of the deep-dose equivalent reported for the individual monitoring device located at the waist under the protective apron multiplied by 1.5 and the deep-dose equivalent reported for the individual monitoring device located at the neck outside the protective apron multiplied by 0.04.

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3. When the external exposure is determined by measurement with an external personal monitoring device, the deep-dose equivalent must be used in place of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the Agency. The assigned deep-dose equivalent shall be determined for the part of the body that receives the highest exposure. The assigned shallow-dose equivalent is the dose averaged over the contiguous 10 square centimeters of skin that receives the highest exposure. The deep-dose equivalent, lens-dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.
- D. Derived air concentration (DAC) and annual limit on intake (ALI) values are presented in Table I of Appendix B and may be used to determine the individual's dose and to demonstrate compliance with the occupational dose limits.
- E. Notwithstanding the annual dose limits, the licensee shall limit the soluble Uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity. See footnote 3 of Appendix B.
- F. The licensee or registrant shall reduce the dose that an individual may receive in the current year by the amount of occupational dose received while employed occupationally as a radiation worker by all previous employers. See R12-1-412.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-409. Summation of External and Internal Doses

- A. If a licensee or registrant is required to monitor according to both R12-1-419(B) and (C), the licensee or registrant shall add external and internal doses, and use the sum to demonstrate compliance with dose limits. If the licensee or registrant is required to monitor only according to R12-1-419(B) or only according to R12-1-419(C), summation is not required to demonstrate compliance with dose limits. The licensee or registrant may demonstrate compliance with the requirements for summation of external and internal doses according to subsections (B), (C), and (D). The dose equivalents for the lens of the eye, the skin, and the extremities are not included in the summation but are subject to separate limits (see R12-1-408(A)(2)).
- B. If the only intake of radionuclides is by inhalation, the total effective dose equivalent limit is not exceeded if the sum of the deep-dose equivalent divided by the total effective dose equivalent limit, and one of the following, does not exceed unity (1):
 1. The sum of the fractions of the inhalation ALI for each radionuclide, or
 2. The total number of derived air concentration-hours (DAC-hours) for all radionuclides divided by 2,000, or
 3. The sum of the calculated committed effective dose equivalents to all significantly irradiated organs or tissues

(T) calculated from bioassay data using applicable biological models and expressed as a fraction of the annual limit. For purposes of this requirement, an organ or tissue is deemed to be significantly irradiated if, for that organ or tissue, the product of the weighting factors, W_T , and the committed dose equivalent, $H_{T,50}$, per unit intake is greater than 10% of the maximum weighted value of $H_{T,50}$, that is, $w_T H_{T,50}$, per unit intake for any organ or tissue.

- C. If the occupationally exposed individual also receives an intake of radionuclides by oral ingestion greater than 10% of the applicable oral ALI, the licensee or registrant shall account for this intake and include it in demonstrating compliance with the limits.
- D. The licensee or registrant shall evaluate and, to the extent practical, account for intakes through wounds or skin absorption. The intake through intact skin has been included in the calculation of DAC for Hydrogen-3 and does not need to be evaluated or accounted for according to this subsection.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-410. Determination of External Dose from Airborne Radioactive Material

- A. Each licensee shall, when determining the dose from airborne radioactive material, include the contribution to the deep-dose equivalent, lens dose equivalent, and shallow dose equivalent from external exposure to the radioactive cloud. See Appendix B, footnotes 1 and 2.
- B. Airborne radioactivity measurements and DAC values shall not be used as the primary means to assess the deep-dose equivalent when the airborne radioactive material includes radionuclides other than noble gases or if the cloud of airborne radioactive material is not relatively uniform. The determination of the deep-dose equivalent to an individual shall be based upon measurements using instruments or individual monitoring devices.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended effective June 20, 1990 (Supp. 90-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-411. Determination of Internal Exposure

- A. For purposes of assessing dose used to determine compliance with occupational dose equivalent limits, each licensee or registrant shall, when required according to R12-1-419, take suitable and timely measurements of:
 1. Concentrations of radioactive materials in air in work areas,
 2. Quantities of radionuclides in the body,
 3. Quantities of radionuclides excreted from the body, or
 4. Combinations of these measurements,
- B. Unless respiratory protective equipment is used, as provided in R12-1-425, or the assessment of intake is based on bioassays, the licensee or registrant shall assume that an individual inhales radioactive material at the airborne concentration in which the individual is present.

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- C. When specific information on the physical and biochemical properties of the radionuclides taken into the body or the behavior of the material in an individual is known, the licensee or registrant may:
1. Use that information to calculate the committed effective dose equivalent, and, if used, the licensee or registrant shall document that information in the individual's record;
 2. Upon prior approval of the Agency, adjust the DAC or ALI values to reflect the actual physical and chemical characteristics of airborne radioactive material, for example, aerosol size distribution or density; and
 3. Separately assess the contribution of fractional intakes of Class D, W, or Y compounds of a given radionuclide to the committed effective dose equivalent. See Appendix B.
- D. If the licensee or registrant chooses to assess intakes of Class Y material using the measurements given in subsection (A)(2) or (3), the licensee or registrant may delay the recording and reporting of the assessments for periods up to seven months, unless otherwise required by R12-1-444 or R12-1-445. This delay permits the licensee or registrant to make additional measurements basic to the assessments.
- E. If the identity and concentration of each radionuclide in a mixture are known, the fraction of the DAC applicable to the mixture for use in calculating DAC-hours is either:
1. The sum of the ratios of the concentration to the appropriate DAC value, that is, D, W, or Y from Appendix B for each radionuclide in the mixture; or
 2. The ratio of the total concentration for all radionuclides in the mixture to the most restrictive DAC value for any radionuclide in the mixture.
- F. If the identity of each radionuclide in a mixture is known, but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture is the most restrictive DAC of any radionuclide in the mixture.
- G. If a mixture of radionuclides in air exists, a licensee may disregard certain radionuclides in the mixture if:
1. The licensee uses the total activity of the mixture to demonstrate compliance with the dose limits in R12-1-408 and complies with the monitoring requirements in R12-1-419;
 2. The concentration of any radionuclide disregarded is less than 10% of its DAC; and
 3. The sum of these percentages for all of the radionuclides disregarded in the mixture does not exceed 30%.
- H. When determining the committed effective dose equivalent, the following information may be considered:
1. In order to calculate the committed effective dose equivalent, the licensee may assume that the inhalation of 1 ALI, or an exposure of 2,000 DAC-hours, results in a committed effective dose equivalent of 0.05 Sv (5 rem) for radionuclides that have their ALIs or DACs based on the committed effective dose equivalent.
 2. For an ALI and the associated DAC determined by the nonstochastic organ dose limit of 0.5 Sv (50 rem), the intake of radionuclides that would result in a committed effective dose equivalent of 0.05 Sv (5 rem), that is, the stochastic ALI, is listed in parentheses in Table I of Appendix B. The licensee may, as a simplifying assumption, use the stochastic ALI to determine committed effective dose equivalent. However, if the licensee or registrant uses the stochastic ALI, the licensee shall also demonstrate that the limit in R12-1-408(A)(1)(b) is met.
- repealed, new Section R12-1-411 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended subsection (F) effective June 26, 1987 (87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
- R12-1-412. Determination of Prior Occupational Dose**
- A. For each individual who is likely to receive in a year an occupational dose that requires monitoring according to R12-1-419 the licensee shall:
1. Determine the occupational radiation dose received during the current year, and
 2. Attempt to obtain the records of lifetime cumulative occupational radiation dose.
- B. Before permitting an individual to participate in a planned special exposure, the licensee or registrant shall determine:
1. The internal and external doses from all previous planned special exposures; and
 2. All doses in excess of the limits received during the lifetime of the individual, including doses received during accidents and emergencies; and
 3. All lifetime, cumulative, occupational radiation doses.
- C. In complying with the requirements of subsection (A), a licensee or registrant shall:
1. Accept, as a record of the occupational dose that the individual received during the current year, a written and signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that discloses the nature and the amount of any occupational dose that the individual received during the current year; and
 2. Accept, as the record of lifetime cumulative radiation dose, an up-to-date Agency Form Y (available from the Agency) or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant; and
 3. Obtain reports of the individual's dose equivalent from the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant, by telephone, telegram, facsimile, or letter. The licensee or registrant shall request a written verification of the dose data if the authenticity of the transmitted report cannot be established.
- D. Records.
1. The licensee or registrant shall record the exposure history, as required by subsection (A), on Agency Form Y (available from the Agency) or a similar clear and legible record of all the information required by this subsection. The form or record shall show each period in which the individual received occupational exposure to radiation or radioactive material and shall be signed by the individual who received the exposure. For each period for which the licensee or registrant obtains reports, the licensee or registrant shall use the dose shown in the report for preparing Agency Form Y or its equivalent. For any period in which the licensee or registrant does not obtain a report, the licensee or registrant shall place a notation on Agency Form Y or its equivalent indicating each period of time for which there is no data.
 2. The licensee or registrant is not required to reevaluate the separate external dose equivalents and internal committed

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Former Rule Section D.101; Former Section R12-1-411

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dose equivalents or intakes of radionuclides assessed according to the rules in Article 4 in effect before January 1, 1994. Occupational exposure histories obtained and recorded on Agency Form Y or its equivalent before January 1, 1994, would not have included effective dose equivalent but may be used in the absence of specific information on the intake of radionuclides by the individual.

3. If the licensee or registrant is unable to obtain a complete record of an individual's current and previously accumulated occupational dose, the licensee or registrant shall:
 - a. In establishing administrative controls under R12-1-408(F) for the current year, reduce the allowable dose limit for the individual by 12.5 mSv (1.25 rem) for each quarter for which records were unavailable and the individual was engaged in activities that could have resulted in occupational radiation exposure; and
 - b. Not subject the individual to planned special exposures.
4. The licensee or registrant shall retain current and prior records on Agency Form Y or its equivalent for three years after the Agency terminates each pertinent license or registration requiring this record. The licensee or registrant shall retain records used in preparing Agency Form Y or its equivalent for three years after the record is made.

Historical Note

Former Rule Section D.102; Former Section R12-1-412 repealed, new Section R12-1-412 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-413. Planned Special Exposures

- A. A licensee or registrant may authorize an adult worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in R12-1-408, provided that each of the following conditions is satisfied:
 1. The licensee or registrant authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid the dose estimated from the planned special exposure are unavailable or impractical.
 2. The licensee or registrant, and employer if the employer is not the licensee or registrant, specifically authorizes the planned special exposure, in writing, before the exposure occurs.
 3. Before a planned special exposure, the licensee or registrant ensures that each individual involved is:
 - a. Informed in writing of the purpose of the planned special exposure;
 - b. Informed in writing of the estimated doses, associated potential risks, and specific radiation levels or other conditions that might be involved in performing the task; and
 - c. Instructed in the measures to be taken to keep the dose ALARA, considering other risks that may be present.
 4. Before permitting an individual to participate in a planned special exposure, the licensee or registrant shall ascertain prior doses as required by R12-1-412(B) for each individual involved.
 5. Subject to R12-1-408(B), the licensee or registrant shall not authorize a planned special exposure that would cause

an individual to receive a dose from all planned special exposures and all doses that exceed:

- a. The numerical value of any of the dose limits in R12-1-408(A) in any year, and
 - b. Five times the annual dose limits in R12-1-408(A) during the individual's lifetime.
6. The licensee or registrant shall maintain records of a planned special exposure in accordance with subsections (B) and (C) and submit a written report to the Agency within 30 days after the date of any planned special exposure conducted in accordance with this Section, informing the Agency that a planned special exposure was conducted and indicating the date the planned special exposure occurred and the information required by subsection (B).
 7. The licensee or registrant shall record the best estimate of the dose resulting from the planned special exposure in the individual's record and inform the individual, in writing, of the dose within 30 days after the date of the planned special exposure. The dose from a planned special exposure shall not be considered in controlling future occupational dose of the individual according to R12-1-408(A) but shall be included in evaluations required by subsections (A)(4) and (A)(5).

B. Records.

1. For each planned special exposure, the licensee or registrant shall maintain records that describe:
 - a. The exceptional circumstances requiring the use of a planned special exposure,
 - b. The name of the management official who authorized the planned special exposure and a copy of the signed authorization,
 - c. What actions were necessary,
 - d. Why the actions were necessary,
 - e. What precautions were taken to assure that doses were minimized in accordance with R12-1-407(B),
 - f. What individual and collective doses were expected,
 - g. The doses actually received in the planned special exposure, and
 - h. The process through which the employee involved in the planned special exposure has been informed in writing of the information contained in subsection (A)(3).
2. The licensee or registrant shall retain the records for three years after the Agency terminates each pertinent license or registration.

- C. A licensee shall submit a report to the Agency no later than 30 days after a planned special exposure conducted in accordance with subsection (A). The report shall contain the date of the planned exposure and the information required by subsection (B).

Historical Note

Former Rule Section D.103. Former Section R12-1-413 repealed, new Section R12-1-413 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-414. Occupational Dose Limits for Minors

The annual occupational dose limits for minors are 10% of the annual occupational dose limits specified for adult workers in R12-1-408.

Historical Note

Former Rule Section D. 104; Former Section R12-1-414 repealed, new Section R12-1-414 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3).

R12-1-415. Dose Equivalent to an Embryo or Fetus

- A.** A licensee or registrant shall ensure that the dose equivalent to an embryo or fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 5 mSv (0.5 rem). Records shall be maintained according to R12-1-419(D)(4) and (5).
- B.** The licensee or registrant shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman to satisfy the limit in subsection (A).
- C.** For purposes of this Section, the dose equivalent to the embryo or fetus is the sum of:
1. The deep-dose equivalent to the declared pregnant woman; and
 2. The dose equivalent to the embryo or fetus resulting from radionuclides in the embryo or fetus and radionuclides in the declared pregnant woman.
- D.** If the dose equivalent to the embryo or fetus is found to have exceeded 5 mSv (0.5 rem) or is within 0.5 mSv (0.05 rem) of this dose by the time the woman declares the pregnancy to the licensee or registrant, the licensee or registrant shall be deemed to be in compliance with subsection (A) if the additional dose equivalent to the embryo or fetus does not exceed 0.5 mSv (0.05 rem) during the remainder of the pregnancy.

Historical Note

Former Rule Section D. 105; Former Section R12-1-415 repealed, new Section R12-1-415 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-416. Dose Limits for Individual Members of the Public

- A.** Each licensee or registrant shall conduct operations so that:
1. The total effective dose equivalent to any individual member of the public from the licensed or registered operation does not exceed 1 mSv (0.1 rem) in a year, excluding the dose contribution from background radiation, medical administration of radiation, exposure to an individual who has been administered radioactive material and released in accordance with R12-1-719, voluntary participation in a medical research program, and the licensee's or registrant's disposal of radioactive material into sanitary sewerage in accordance with R12-1-436; and
 2. The dose in any unrestricted area from an external source excluding the dose contribution from an individual who has been administered radioactive material and released in accordance with R12-1-719, does not exceed 0.02 mSv (0.002 rem) in any one hour.
- B.** Registrants possessing radiation machines in operation before August 10, 1994, are exempt from the requirement in subsection (A)(1). Operation of these machines shall be conducted so that the total effective dose equivalent to any individual member of the public does not exceed 5 mSv (0.5 rem) in a year.
- C.** A licensee, registrant, or an applicant for a license or registration may apply for Agency authorization to operate with an

annual dose limit of 5 mSv (0.5 rem) for an individual member of the public. The application shall include the following information:

1. An explanation of the need for and the expected duration of operations in excess of the limit in subsection (A), and
 2. The licensee's or registrant's program to assess and control dose within the 5 mSv (0.5 rem) annual limit; and
 3. The procedures to be followed to maintain the dose in accordance with R12-1-407(B).
- D.** A licensee or registrant shall comply with the U.S. Environmental Protection Agency's applicable environmental radiation standards in 40 CFR 190, 2003 edition, published July 1, 2003, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which are incorporated by reference, on file with the Agency and contain no future editions or amendments.
- E.** The Agency may impose additional restrictions on radiation levels in unrestricted areas and on the total quantity of radionuclides that a licensee or registrant may release in effluents in order to restrict the collective dose.
- F.** Each licensee or registrant shall make or cause to be made surveys of radiation levels in unrestricted areas and radioactive materials contained in effluents released to unrestricted areas.
- G.** Each licensee or registrant shall:
1. Demonstrate by measurement or calculation that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed or registered operation does not exceed the annual dose limit; or
 2. Demonstrate that:
 - a. The annual average concentrations of radioactive material released in gaseous and liquid effluents at the boundary of the unrestricted area do not exceed the values specified in Appendix B, Table II; and
 - b. If an individual were continually present in an unrestricted area, the dose from external sources would not exceed 0.02 mSv (0.002 rem) in an hour and 0.5 mSv (0.05 rem) in a year.
- H.** Upon approval from the Agency, the licensee or registrant may adjust the effluent concentration values in Appendix B, Table II for members of the public, to take into account the actual physical and chemical characteristics of the effluents, such as aerosol size distribution, solubility, density, radioactive decay equilibrium, and chemical form.
- I.** Each licensee or registrant shall maintain records sufficient to demonstrate compliance with the dose limit for individual members of the public and shall retain the records for three years after the Agency terminates each pertinent license or registration.

Historical Note

Former Rule Section D. 106; Former Section R12-1-416 repealed, new Section R12-1-416 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-417. Testing for Leakage or Contamination of Sealed Sources

- A.** A licensee in possession of any sealed source shall ensure that:
1. Each sealed source, except as specified in subsection (B), is tested for leakage or contamination and the test results are received before the sealed source is put into use unless the licensee has a certificate from the transferor indicating that the sealed source was tested within six months before transfer to the licensee or registrant.

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2. Each sealed source that is not designed to emit alpha particles is tested for leakage or contamination at intervals not to exceed six months or at alternative intervals approved by the Agency, after evaluation of information specified by R12-1-311(D)(2) and (D)(3), or equivalent information specified by an Agreement State, a Licensing State, or the U.S. Nuclear Regulatory Commission.
 3. Each sealed source that is designed to emit alpha particles is tested for leakage or contamination at intervals not to exceed three months or at alternative intervals approved by the Agency, after evaluation of information specified by R12-1-311(D)(2) and (D)(3), or equivalent information specified by an Agreement State, a Licensing State, or the Nuclear Regulatory Commission.
 4. Each sealed source suspected of damage or leakage is tested for leakage or contamination before further use.
 5. Tests for leakage for all sealed sources, except brachytherapy sources manufactured to contain radium, are capable of detecting the presence of 185 Bq (0.005 μ Ci) of radioactive material on a test sample. The person conducting the test shall take test samples from the sealed source or from the surfaces of the container in which the sealed source is stored or mounted on which contamination could accumulate. For a sealed source contained in a device, the person conducting the test shall obtain test samples when the source is in the "off" position.
 6. The test for leakage from brachytherapy sources containing radium is capable of detecting an absolute leakage rate of 37 Bq (0.001 μ Ci) of Radon-222 in a 24-hour period when the collection efficiency for Radon-222 and its daughters has been determined with respect to collection method, volume, and time.
 7. Tests for contamination from radium daughters are taken on the interior surface of brachytherapy source storage containers and are capable of detecting the presence of 185 Bq (0.005 μ Ci) of a radium daughter which has a half-life greater than four days.
- B.** A licensee need not perform tests for leakage or contamination on the following sealed sources:
1. Sealed sources containing only radioactive material with a half-life of less than 30 days;
 2. Sealed sources containing only radioactive material as a gas;
 3. Sealed sources containing 3.7 MBq (100 μ Ci) or less of beta or photon-emitting material or 370 kBq (10 μ Ci) or less of alpha-emitting material;
 4. Sealed sources containing only Hydrogen-3;
 5. Seeds of Iridium-192 encased in nylon ribbon; and
 6. Sealed sources, except teletherapy and brachytherapy sources, which are stored, not being used, and identified as in storage. The licensee shall test each sealed source for leakage or contamination and receive the test results before any use or transfer unless it has been tested for leakage or contamination within six months before the date of use or transfer.
- C.** Persons specifically authorized by the Agency, an Agreement State, a Licensing State, or the U.S. Nuclear Regulatory Commission shall perform tests for leakage or contamination from sealed sources.
- D.** A licensee shall maintain for Agency inspection test results in units of becquerel or microcurie.
- E.** The following is considered evidence that a sealed source is leaking:
1. The presence of 185 Bq (0.005 μ Ci) or more of removable contamination on any test sample.
 2. Leakage of 37 Bq (0.001 μ Ci) of Radon-222 per 24 hours for brachytherapy sources manufactured to contain radium.
 3. The presence of removable contamination resulting from the decay of 185 Bq (0.005 μ Ci) or more of radium.
- F.** A licensee shall immediately withdraw a leaking sealed source from use and shall take action to prevent the spread of contamination. The leaking sealed source shall be repaired or disposed of in accordance with this Article.
- G.** A licensee shall file a report with the Agency within five days if the test for leakage or contamination indicates a sealed source is leaking or contaminated. The report shall include the equipment involved, the test results, and the corrective action taken.
- H.** A licensee shall maintain records of the tests for leakage required in subsection (A) for three years after the records are made.

Historical Note

Former Rule Section D. 107; Former Section R12-1-417 repealed, new Section R12-1-417 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-418. Surveys and Monitoring

- A.** Each licensee or registrant shall make, or cause to be made, surveys if surveys are:
1. Necessary for the licensee or registrant to comply with Article 4, and
 2. Reasonable under the circumstances to evaluate:
 - a. The magnitude and extent of radiation levels, and
 - b. Concentrations or quantities of residual radioactivity, and
 - c. The potential radiological hazards of the radiation levels and residual radioactivity detected.
- B.** All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremity, that require processing to determine the radiation dose and that are used by licensees and registrants to comply with R12-1-408, with other applicable provisions of these rules, or with conditions specified in a license or registration shall be processed and evaluated by a dosimetry processor:
1. Holding current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology, according to NVLAP procedures published March 1994 as NIST Handbook 150, and NIST Handbook 150-4, published August 1994, which is incorporated by reference, published by the U.S. Government Printing Office, Washington D.C. 20402-9325, and on file with the Agency. The material incorporated by reference contains no future editions or amendments; and
 2. Approved in this accreditation process for the type of radiation or radiations included in the NVLAP program that most closely approximates the type of radiation or radiations for which the individual wearing the dosimeter is monitored.
- C.** The licensee or registrant shall ensure that adequate precautions are taken to prevent a deceptive exposure of an individual monitoring device and that personnel monitoring devices are issued to, and used by only the individual to whom the monitoring device has been first issued during any reporting period.

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- D.** A licensee shall ensure that survey instruments and personnel dosimeters that are used to make quantitative measurements are calibrated in accordance with R12-1-449.
- E.** Records.
1. Each licensee or registrant shall maintain records showing the results of surveys required by this Section and R12-1-433(B). The licensee or registrant shall retain these records for three years after the record is made.
 2. The licensee or registrant shall retain each of the following records for three years after the Agency terminates the license or registration:
 - a. Records of the survey results used to determine the dose from external sources of radiation, in the absence of or in combination with individual monitoring data, and provide an assessment of individual dose equivalents;
 - b. Records of the results of measurements and calculations used to determine individual intakes of radioactive material and to assess an internal dose;
 - c. Records showing the results of air sampling, surveys, and bioassays required according to R12-1-425(A)(3)(a) and (b); and
 - d. Records of the measurement and calculation results used to evaluate the release of radioactive effluents to the environment.

Historical Note

Former Rule Section D. 108; Former Section R12-1-418 repealed, new Section R12-1-418 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-419. Conditions Requiring Individual Monitoring of External and Internal Occupational Dose

- A.** Each licensee or registrant shall monitor exposures from sources of radiation at levels sufficient to demonstrate compliance with the occupational dose limits of this Article.
- B.** At minimum each licensee or registrant shall supply and require the use of individual monitoring devices by the following personnel:
1. Adults likely to receive, in one year, an intake in excess of 10% of the applicable ALI in Table I, Columns 1 and 2, of Appendix B;
 2. Minors and declared pregnant women likely to receive, in one year, a committed effective dose equivalent in excess of 0.5 mSv (0.05 rem);
 3. Adults likely to receive, in one year from radiation sources external to the body, a dose in excess of 10 percent of the limits in R12-1-408(A);
 4. Minors likely to receive, in one year, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem), a lens dose equivalent in excess of 1.5 mSv (0.15 rem), or a shallow dose equivalent to the skin or to the extremities in excess of 5 mSv (0.5 rem);
 5. Declared pregnant women likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem) (Note: All of the occupational doses in R12-1-408 continue to be applicable to the declared pregnant worker as long as the embryo/fetus dose limit is not exceeded.); and
6. Individuals entering a high or very high radiation area;
 7. Individuals operating mobile x-ray equipment, except dental intraoral systems, as described in R12-1-608;
 8. Individuals holding animals for diagnostic x-ray procedures, as described in R12-1-613;
 9. Individuals servicing enclosed beam x-ray systems with bypassed interlocks, as described in R12-1-803;
 10. Individuals operating open beam fluoroscopic systems and ancillary personnel working in the room when the fluoroscopic system is in use, except when relieved of this requirement by registration condition;
 11. Individuals performing well logging, as described in Article 17; and
 12. Individuals, wearing a finger or wrist individual monitoring device, during the operation of an open-beam or hand held analytical x-ray system or equipment with no safety devices as described in R12-1-806(C) and (F).
 13. Individuals, wearing a finger or wrist individual monitoring device, performing repairs that require the presence of a primary beam of the analytical x-ray system or equipment, as described in R12-1-806(C) and (F).
- C.** Each licensee shall monitor the occupational intake of radioactive material by and assess the committed effective dose equivalent to:
1. Adults likely to receive, in one year, an intake in excess of 10 percent of the applicable ALI in Table I, Columns 1 and 2, of Appendix B;
 2. Minors likely to receive, in one year, a committed effective dose equivalent in excess of 1 mSv (0.1 rem); and
 3. Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 1 mSv (0.1 rem).
- D.** Each licensee or registrant shall require that all individual monitoring devices be located on individuals according to the following requirements:
1. An individual monitoring device, used to obtain the dose equivalent to an embryo or fetus of a declared pregnant woman according to R12-1-415, shall be located under the protective apron at the waist. A qualified expert shall be consulted to determine the dose equivalent to the embryo or fetus if this individual monitoring device has a monthly reported dose equivalent value that exceeds 0.5 millisieverts (50 millirem). For purposes of this subsection, the value for determining the dose equivalent to an embryo or fetus under R12-1-415(C), for occupational exposure to radiation from medical fluoroscopic equipment, is the value reported by the individual monitoring device worn at the waist underneath the protective apron, which has been corrected for the particular individual and the work environment by a qualified expert.
 2. An individual monitoring device used for lens dose equivalent shall be located at the neck or an unshielded location closer to the eye, outside the protective apron.
 3. If only one individual monitoring device is used to determine the effective dose equivalent for external radiation, according to R12-1-408(C)(2)(a), the device shall be located at the neck outside the protective apron. If a second individual monitoring device is used for the same purpose, it shall be located under the protective apron at the waist. A second individual monitoring device is required for a declared pregnant woman.

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4. An individual, wearing an extremity personnel monitoring device, during the operation of an open-beam or hand-held analytical x-ray system with no safety devices or an individual performing repairs in the presence of a primary beam of the analytical x-ray system or equipment, as described in R12-1-806(C) and (F), shall wear the device on the individual's finger or wrist.
- E. Records.**
1. Each licensee or registrant shall maintain records of doses received by all individuals for whom monitoring is required according to this Section, and records of doses received during planned special exposures, accidents, and emergency conditions. Assessments of dose equivalent and records made using units in effect before January 1, 1994, need not be changed. These records shall include, when applicable:
 - a. The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin, and shallow-dose equivalent to the extremities;
 - b. The estimated intake of radionuclides;
 - c. The committed effective dose equivalent assigned to the intake of radionuclides;
 - d. The specific information used to assess the committed effective dose equivalent according to R12-1-411(A) and (C), and when required R12-1-419.
 - e. The total effective dose equivalent when required by R12-1-409; and
 - f. The total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose;
 2. The licensee or registrant shall make entries of the records specified in subsection (D)(1), at intervals not to exceed one year;
 3. The licensee or registrant shall maintain at the inspection site the records specified in subsection (D)(1), on Agency Form Z (available from the Agency), in accordance with the instructions for Agency Form Z, or in clear and legible records containing all the information required by this subsection;
 4. The licensee or registrant shall maintain the records of dose to an embryo or fetus with the records of dose to the declared pregnant woman. The declaration of pregnancy, including the estimated date of conception, shall also be kept on file but may be maintained separately from the dose records;
 5. The licensee or registrant shall retain each required form or record for three years after the Agency terminates each pertinent license or registration requiring the record.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-420. Control of Access to High Radiation Areas

- A.** A licensee or registrant shall ensure that each entrance or access point to a high radiation area has one or more of the following features:
1. A control device that, upon entry into the area, causes the level of radiation to be reduced below the level at which an individual might receive a deep-dose equivalent of 1 mSv (0.1 rem) in one hour at 30 centimeters from the source from any surface that the radiation penetrates;
 2. A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry; or
 3. Entryways that are locked, except during periods when access to the areas is required, with positive control over each individual entity.
- B.** In place of the controls required by subsection (A) for a high radiation area, the licensee or registrant may substitute continuous direct or electronic surveillance that is capable of preventing unauthorized entry.
- C.** The licensee or registrant may apply to the Agency for approval of alternative methods for controlling access to high radiation areas.
- D.** The licensee or registrant shall establish the controls required by subsections (A) and (C) in a way that does not prevent individuals from leaving a high radiation area.
- E.** The licensee or registrant is not required to control each entrance or access point to a room or other area that is a high radiation area solely because of the presence of radioactive materials prepared for transport and packaged and labeled in accordance with the regulations of the U.S. Department of Transportation, provided that:
1. The packages do not remain in the area longer than three days, and
 2. The dose rate at 1 meter from the external surface of any package does not exceed 0.1 mSv (0.01 rem) per hour.
- F.** The licensee or registrant is not required to control entrance or access to rooms or other areas in hospitals solely because of the presence of patients containing radioactive material, provided that there are personnel in attendance who are taking the necessary precautions to prevent the exposure of individuals to radiation or radioactive material in excess of the established limits in Article 4 and operate in accordance with R12-1-407(B) and the provisions of the licensee's or registrant's radiation protection program.
- G.** The registrant is not required to control entrance or access to rooms or other areas containing sources of radiation capable of producing a high radiation area if the registrant has met all the specific requirements for access and control specified in other applicable Articles of these rules, such as Article 5 for industrial radiography, Article 6 for x-rays in the healing arts, and Article 9 for particle accelerators.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-421. Control of Access to Very-high Radiation Areas

- A.** In addition to the requirements in R12-1-420, a licensee or registrant shall institute measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 5 Gy (500 rad) or more in one hour at 1 meter from a source or from any surface that the radiation penetrates. This requirement does not

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apply to rooms or areas in which diagnostic x-ray systems are the only source of radiation or non-self-shielded irradiators.

- B. The registrant is not required to control entrance or access to rooms or other areas containing sources of radiation capable of producing a very high radiation area, described in subsection (A), if the registrant has met all requirements for access and control specified in other applicable Articles of these rules, such as Article 5 for industrial radiography, Article 6 for x-rays in the healing arts, and Article 9 for particle accelerators.
- C. Each licensee or registrant shall maintain records of tests made according to R12-1-422(B)(9) on entry control devices for very-high radiation areas. These records shall include the date, time, and results of each test of function.
- D. The licensee or registrant shall retain the records required by this Section for three years after the record is made.

Historical Note

Former Rule Section D.201; Former Section R12-1-421 repealed, new Section R12-1-421 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-422. Control of Access to Irradiators (Very-high Radiation Areas)

- A. This Section applies to licensees or registrants with sources of radiation in non-self-shielded irradiators. This Section does not apply to sources of radiation that are used in teletherapy, industrial radiography, or completely self-shielded irradiators in which the source of radiation is both stored and operated within the same shielding radiation barrier and, in the designed configuration of the irradiator, is always physically inaccessible to any individual and cannot create high levels of radiation in an area that is accessible to any individual.
 - B. A licensee or registrant shall ensure that each area in which radiation levels may exceed 5 Gy (500 rad) in one hour at 1 meter from a source that is used to irradiate materials meets the following requirements:
 - 1. Each entrance or access point shall be equipped with entry control devices that:
 - a. Function automatically to prevent any individual from inadvertently entering a very high radiation area;
 - b. Permit deliberate entry into the area only after a control device is actuated that causes the radiation level within the area, from the source of radiation, to be reduced below that at which it would be possible for an individual to receive a deep-dose equivalent in excess of 1 mSv (0.1 rem) in one hour; and
 - c. Prevent operation of the source of radiation if it would produce radiation levels in the area that could result in a deep-dose equivalent to an individual in excess of 1 mSv (0.1 rem) in one hour.
 - 2. If the control devices required in subsection (B)(1) fail to function, additional control devices shall be provided so that:
 - a. The radiation level within the area, from the source of radiation, is reduced below that at which it would be possible for an individual to receive a deep-dose equivalent in excess of 1 mSv (0.1 rem) in one hour; and
 - b. Conspicuous visible and audible alarm signals are generated so that an individual entering the area is aware of the hazard. The individual who enters the very-high radiation area after an alarm signals shall be familiar with the process and equipment. Before entering, the individual shall ensure that a second individual is present and aware of the first person's actions.
3. The licensee or registrant shall provide control devices so that, upon failure or removal of physical radiation barriers other than the sealed source's shielded storage container:
 - a. The radiation level from the source of radiation is reduced below that at which it would be possible for an individual to receive a deep-dose equivalent in excess of 1 mSv (0.1 rem) in one hour, and
 - b. Conspicuous visible and audible alarm signals are generated so that potentially affected individuals are aware of the hazard. Potentially affected individuals shall notify the licensee or registrant of the failure or removal of the physical barriers.
 4. When the shield for stored sealed sources is a liquid, the licensee or registrant shall provide means to monitor the integrity of the shield and to signal, automatically, loss of adequate shielding.
 5. Physical radiation barriers that comprise permanent structural components, such as walls, that have no credible probability of failure or removal in ordinary circumstances need not meet the requirements of subsections (B)(3) and (4).
 6. The licensee or registrant shall equip each area with devices that will automatically generate conspicuous visible and audible alarm signals to alert personnel in the area before the source of radiation can be put into operation and in time for any individual in the area to operate a clearly identified control device, installed in the area, and which can prevent the source of radiation from being put into operation.
 7. The licensee or registrant shall control each area by use of administrative procedures and devices necessary to ensure that the area is cleared of personnel before each use of the source of radiation.
 8. The licensee or registrant shall check each area by radiation measurement to ensure that, before the first individual's entry into the area after any use of the source of radiation, the radiation level from the source of radiation in the area will not expose an individual to a deep-dose equivalent in excess of 1 millisievert (0.1 rem) in one hour.
 9. The licensee or registrant shall test the entry control devices required in subsection (B)(1) for proper functioning and keep records according to R12-1-421.
 - a. Testing shall be conducted before initial operation with the source of radiation on any day, unless operations were continued uninterrupted from the previous day;
 - b. Testing shall be conducted before resumption of operation of the source of radiation after any unintentional interruption;
 - c. The licensee or registrant shall submit to the Agency a schedule of testing; and
 - d. The licensee or registrant shall include in the schedule a listing of the periodic testing that will be followed.
 10. The licensee or registrant shall not conduct operations, other than those necessary to place the source of radiation in a safe condition or effect repairs on controls, unless control devices are functioning properly.
 11. The licensee or registrant shall control entry and exit portals that are used in transporting materials to and from the

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irradiation area, and that are not intended for use by personnel, with devices and administrative procedures necessary to physically protect and warn against inadvertent entry by an individual through one of the portals. Exit portals for irradiated materials shall be equipped to detect and signal the presence of any uncontained radioactive material that is carried toward an exit and automatically prevent contained radioactive material from being carried out of the area.

- C. A licensee, registrant, or applicant seeking a license or registration for a source of radiation within the purview of subsection (B) that will be used in a variety of positions or in locations, such as open fields or forests, that make it impractical to comply with certain requirements of subsection (B) may apply to the Agency for approval of alternative safety measures. Alternative safety measures shall provide personnel protection at least equivalent to that specified in subsection (B). At least one of the alternative measures shall be an entry-preventing interlock control, based on a measurement of the radiation that ensures the absence of high radiation levels before an individual can gain access to the area where the sources of radiation are used.
- D. A licensee or registrant shall provide the entry control devices required by subsections (B) and (C) in such a way that no individual will be prevented from leaving the area.
- E. Records.
1. Each licensee or registrant shall maintain records of tests made according to subsection (B)(9) on entry control devices for very-high radiation areas. These records shall include the date and results of each test of function.
 2. The licensee or registrant shall retain the records for three years from the date the record is made.

Historical Note

Former Rule Section D.202; Former Section R12-1-422 repealed, new Section R12-1-422 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-423. Use of Process or Other Engineering Controls

A licensee shall use, to the extent practicable, process or other engineering controls, such as containment, decontamination, or ventilation, to control the concentration of radioactive material in air.

Historical Note

Former Rule Section D.203. Former Section R12-1-423 repealed, new Section R12-1-423 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-424. Use of Other Controls

- A. If it is not practical to apply process or other engineering controls to control concentrations of radioactive material in the air to values below those that define an airborne radioactivity area, the licensee shall, consistent with maintaining the total effective dose equivalent according to R12-1-407(B), increase monitoring and limit intakes by one or more of the following means:
1. Control access,
 2. Limit exposure times,
 3. Use respiratory protection equipment, or

4. Use other controls.

- B. If the licensee performs an ALARA analysis to determine whether or not respirators should be used, the licensee may consider safety factors other than radiological factors. The licensee shall also consider the impact of respirator use on workers' industrial health and safety.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-425. Use of Individual Respiratory Protection Equipment

- A. If a licensee assigns or permits the use of respiratory protection equipment to limit the intake of radioactive material,
1. Except as provided in subsection (A)(2), the licensee shall use only respiratory protection equipment that is tested and certified by the National Institute for Occupational Safety and Health (NIOSH).
 2. If the licensee wishes to use equipment that has not been tested or certified by NIOSH, or for which there is no schedule for testing or certification, the licensee shall submit an application to the Agency and request authorization for use of this equipment, except as otherwise provided in this Section. The licensee shall provide evidence with the application that the material and performance characteristics of the equipment provide the asserted degree of protection under anticipated conditions of use. The licensee shall demonstrate the degree of protection by providing reliable test information.
 3. The licensee shall implement and maintain a respiratory protection program that includes:
 - a. Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate doses;
 - b. Surveys and bioassays, as necessary, to evaluate actual intakes;
 - c. Testing of respirators for operability (user seal check for face sealing devices and functional check for other devices) immediately before each use;
 - d. Written procedures regarding:
 - i. Monitoring, including air sampling and bioassays;
 - ii. Supervision and training of respirator users;
 - iii. Fit testing;
 - iv. Respirator selection;
 - v. Breathing air quality;
 - vi. Inventory and control;
 - vii. Storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment;
 - viii. Recordkeeping; and
 - ix. Limitations on periods of respirator use and relief from respirator use;
 - e. Determination by a physician that each individual user is able to use respiratory protection equipment:
 - i. Before the initial fitting of a face-sealing respirator;
 - ii. Before the first field use of a non-face-sealing respirator, and
 - iii. Every 12 months after initial fitting or first use, or periodically at a frequency determined by a physician.

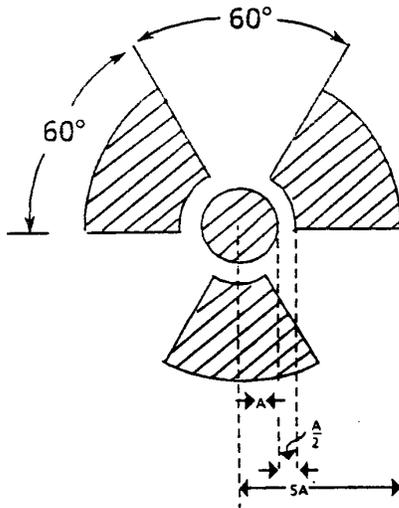
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- f. Fit testing, with a fit factor ≥ 10 times the APF for a negative pressure device and a fit factor ≥ 500 for any positive pressure, continuous flow, and pressure-demand device, before the first field use of tight-fitting, face-sealing respirators and periodically after first use at least yearly. The licensee shall perform fit testing with the face piece operating in the negative pressure mode.
4. The licensee shall advise each respirator user that the user may leave the area at any time for relief from respirator use, in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other condition that might require relief.
 5. The licensee shall consider manufacturer limitations regarding respirator type and mode of use. When selecting a respiratory device, the licensee shall provide for vision correction, adequate communication, low temperature work environments, and the concurrent use of other safety or radiological protection equipment. The licensee shall use equipment in a manner that does not interfere with the proper operation of the respirator.
 6. The licensee shall provide standby rescue persons whenever one-piece atmosphere-supplying suits, or any combination of supplied air respiratory protection device and personnel protective equipment are used from which an unaided individual would have difficulty extricating himself or herself. The licensee shall equip standby rescue persons with respiratory protection devices or other apparatus designed for potential hazards and anticipated conditions of use. The standby rescue persons shall observe or otherwise maintain continuous communication with the workers (visual, voice, signal line, telephone, radio, or other suitable means), and be immediately available to assist them in case of a failure of the air supply or for any other reason that requires relief from distress. The licensee shall provide at least one standby rescue person for every five workers, who is immediately available to assist any worker using this type of equipment and provide effective emergency rescue if needed.
 7. The licensee shall supply atmosphere-supplying respirators with respirable air of grade D quality or better as defined by the Compressed Gas Association in publication G-7.1, "Commodity Specification for Air," 1997 and included in the regulations of OSHA (29 CFR 1910.134(j)(1)(ii)(A) through (E), July 1, 2003, incorporated by reference and on file with the Agency, containing no future editions or amendments). Grade D quality air criteria include:
 - a. Oxygen content (v/v) of 19.5-23.5%;
 - b. Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
 - c. Carbon monoxide (CO) content of 10 ppm or less;
 - d. Carbon dioxide content of 1,000 ppm or less; and
 - e. Lack of noticeable odor.
 8. The licensee shall ensure that no objects, materials, or substances, such as facial hair, or any conditions that interfere with the face-to-face piece seal or valve function, and that are under the control of the respirator wearer, are present between the skin of the wearer's face and the sealing surface of a tight-fitting respirator face piece.
 9. In estimating the dose to individuals from intake of airborne radioactive materials, the licensee shall use the concentration of radioactive material in the air that is inhaled when respirators are worn, which is determined by dividing the ambient concentration in air without respiratory protection by the assigned protection factor. If the dose is later found to be greater than the estimated dose, the licensee shall modify the calculation using the corrected value. If the dose is later found to be less than the estimated dose, the licensee may modify the calculation using the corrected value.
- B. The licensee shall use Appendix A to select equipment and associated assigned protection factors.
 - C. A licensee shall apply to the Agency for authorization to use assigned protection factors in excess of those specified in Appendix A. To apply for authorization the licensee shall:
 1. State the reason for the higher protection factors; and
 2. Demonstrate that the requested respiratory protective equipment provides the higher protection factors under the proposed conditions of use.
 - D. The licensee shall notify the Agency in writing at least 30 days before the date that respiratory protective equipment is first used according to subsection (A) or (C).
- Historical Note**
Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).
- R12-1-426. Security of Stored Sources of Radiation**
A licensee or registrant shall secure from unauthorized removal or access licensed or registered sources of radiation that are stored in unrestricted areas.
- Historical Note**
Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
- R12-1-427. Control of Sources of Radiation Not in Storage**
- A. A licensee shall control and maintain constant surveillance of licensed radioactive material that is in an unrestricted area and is not in storage or in a patient.
 - B. A registrant shall maintain control of radiation machines that are in an unrestricted area and not in storage.
- Historical Note**
Adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
- R12-1-428. Caution Signs**
- A. Unless otherwise authorized by the Agency, a licensee or registrant shall use the symbol prescribed by this Section with the colors magenta, or purple, or black on yellow background as the standard radiation symbol. The symbol prescribed is the three-bladed design as follows:

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 1. Cross-hatched area is to be magenta, purple, or black; and

2. The background is to be yellow.



- B. Notwithstanding the requirements of subsection (A), licensees or registrants are authorized to label sources of radiation, source holders, or device components containing sources of radiation that are subjected to high temperatures, with conspicuously etched or stamped radiation caution symbols that lack the color scheme required in subsection A.
- C. In addition to the contents of signs and labels prescribed in this Article, the licensee or registrant shall provide, on or near the required signs and labels, additional information to make individuals aware of potential radiation exposures and to minimize the exposures.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-428 repealed, new Section R12-1-428 adopted effective June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-429. Posting

- A. A licensee or registrant shall post each radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA."
- B. The licensee or registrant shall post each high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA."
- C. The licensee or registrant shall post each very-high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "GRAVE DANGER, VERY HIGH RADIATION AREA."
- D. The licensee shall post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."
- E. The licensee shall post each area or room in which there is used or stored an amount of licensed material exceeding 10 times the quantity of licensed material specified in Appendix C with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)."

Historical Note

Former Section R12-1-429 repealed effective June 30, 1977 (Supp. 77-3). New Section 12-1-429 adopted effective

June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-430. Exceptions to Posting Requirements

- A. A licensee or registrant is not required to post caution signs in areas or rooms containing sources of radiation for periods of less than eight hours, if each of the following conditions is met:
1. The sources of radiation are constantly attended during these periods by an individual who takes precautions necessary to prevent exposure of individuals to sources of radiation in excess of limits established in this Article; and
 2. The area or room is subject to the licensee's or registrant's control.
- B. A licensee or registrant is not required to post a caution sign in a room or other area in a hospital that is occupied by an individual who has been administered radioactive material, if the individual meets the criteria for release in R12-1-719.
- C. A licensee or registrant is not required to post a caution sign in a room or area because of the presence of a sealed source, provided the radiation level at 30 centimeters from the surface of the sealed source container or housing does not exceed 0.05 mSv (0.005 rem) per hour.
- D. A hospital or clinic licensee is exempt from the posting requirements in R12-1-429 for a teletherapy room if:
1. Access to the room is controlled according to R12-1-731; and
 2. Personnel in attendance take necessary precautions to prevent the inadvertent exposure of workers, other patients, and members of the public to radiation that exceeds the limits established in this Chapter.
- E. A registrant is not required to post a caution sign in a room or area because of the presence of radiation machines used solely for diagnosis in the healing arts.

Historical Note

Former Section R12-1-430 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-430 adopted effective June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-431. Labeling Containers and Radiation Machines

- A. A licensee shall ensure that each container of licensed material is labeled with a durable, clearly visible radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label shall also provide information, such as the radionuclides present, an estimate of the quantity of radioactivity, the date for which the radioactivity is estimated, radiation level, kind of material, and mass enrichment, to permit an individual handling or using a container, or working in the vicinity of a container, to take precautions to avoid or minimize exposure.
- B. Before removal or disposal of an empty, uncontaminated container to an unrestricted area, each licensee shall remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.
- C. Each registrant shall ensure that each radiation machine is labeled in a conspicuous manner to caution an individual that radiation is produced when it is energized.

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D. A licensee shall label each syringe and vial that contains a radiopharmaceutical used in the practice of medicine with the radiopharmaceutical content. Each syringe shield and vial shield shall be labeled, unless the label on the syringe or vial is visible when shielded. The label shall contain the radiopharmaceutical name or its abbreviation, the clinical procedure to be performed, or the name of the person being administered the radiopharmaceutical. Color-coding syringe shields and vial shields does not meet the labeling requirement.

Historical Note

Former Section R12-1-431 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-431 adopted effective June 26, 1987 (Supp. 87-2). Amended effective November 5, 1993 (Supp. 93-4). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-432. Labeling Exemptions

A licensee is not required to label:

1. Containers holding licensed material in quantities less than the quantities listed in Appendix C;
2. Containers holding licensed material in concentrations less than those specified in Table III of Appendix B;
3. Containers attended by an individual who takes precautions necessary to prevent exposure of individuals to radiation in excess of the limits established in this Article;
4. Containers holding radioactive material that do not exceed the limits for excepted quantity or article as defined and limited in 49 CFR 173.403, and 173.421 through 173.424, and are transported, packaged, and labeled in accordance with 49 CFR 172.436 through 172.440 (Revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
5. Containers that are accessible only to individuals authorized to handle, use, or work in the vicinity of the containers, if the contents are identified to these individuals by a readily available written record, retained as long as the container is in use for the purpose indicated on the record. (Examples of containers of this type are containers in locations such as water-filled canals, storage vaults, or hot cells.); or
6. Installed manufacturing or process equipment, such as piping and tanks.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-433. Procedures for Receiving and Opening Packages

A. Each licensee who expects to receive a package containing quantities of radioactive material in excess of a Type A quantity, as defined in 10 CFR 71.4, January 1, 2005, which is incorporated by reference, published by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. The material incorporated by reference contains no future editions or amendments. The licensee shall make arrangements to receive:

1. The package when the carrier offers it for delivery; or

2. The notification of the arrival of the package at the carrier's terminal and to take possession of the package expeditiously.

B. Each licensee shall:

1. Monitor the external surfaces of a package, labeled with a Radioactive White I, Yellow II, or Yellow III as specified in 49 CFR 172.403 and 172.436 through 172.440, October 1, 2004, which are incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. The material incorporated by reference contains no future editions or amendments. The licensee shall test the package for radioactive contamination, unless the package contains only radioactive material in the form of gas or in special form, as defined in R12-1-102; and
2. Monitor the external surfaces of a package, labeled with a Radioactive White I, Yellow II, or Yellow III as specified in subsection (B)(1), for radiation levels unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, defined in 10 CFR 71, and referenced in subsection (A); and
3. Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if there is evidence of degradation of package integrity, such as packages that are crushed, wet, or damaged.

C. The licensee shall perform the monitoring required by subsection (B) as soon as practical after receipt of the package, but not later than three hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than three hours from the beginning of the next working day if it is received after working hours.

D. The licensee shall immediately notify the final delivery carrier and the Agency by telephone when:

1. Removable radioactive surface contamination exceeds 22 dpm/cm² for beta-gamma emitting radionuclides or 2.2 dpm/cm² for alpha-emitting radionuclides, wiping a minimum surface area of 300 square centimeters (46 square inches), or the entire surface if less than 300 square centimeters (46 square inches); or
2. External radiation levels exceed the limits of 2 millisieverts (200 millirem) per hour.

E. Each licensee shall:

1. Establish, maintain, and retain written procedures for safely opening packages that contain radioactive material, and
2. Ensure that the procedures are followed and that due consideration is given to special instructions for the type of package being opened.

F. Licensees transferring special form sources in vehicles owned or operated by the licensee to and from a work site are exempt from the contamination monitoring requirements of subsection (B) but are not exempt from the monitoring requirement in subsection (B) for measuring radiation levels that ensures that the source of radiation is still properly lodged in its shield.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-434. General Requirements for Waste Disposal

A. A licensee shall dispose of licensed material only:

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1. By transfer to an authorized recipient as provided in R12-1-439 or in Article 3 of these rules, or to the U.S. Department of Energy;
 2. By decay in storage, according to R12-1-438(C)
 3. By release in effluents within the limits in R12-1-416; or
 4. As authorized according to R12-1-435, R12-1-436, R12-1-437, R12-1-438, or R12-1-438.01;
- B.** To receive waste that contains licensed material from other persons, a person shall be specifically licensed for:
1. Treatment prior to disposal,
 2. Treatment or disposal by incineration,
 3. Decay in storage,
 4. Disposal at a land disposal facility licensed according to Article 3 of these rules, or
 5. Storage until transferred to a storage or disposal facility authorized to receive the waste.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-435. Method for Obtaining Approval of Proposed Disposal Procedures

For disposal of licensed material generated in the licensee's operations, a licensee or applicant for a license may apply to the Agency for approval of proposed disposal procedures, not otherwise authorized in this Chapter. Each application shall include:

1. A description of the waste containing licensed material to be disposed of, including the physical and chemical properties that have an impact on risk evaluation;
2. The proposed manner and conditions of waste disposal;
3. An analysis and evaluation of pertinent information on the nature of the environment;
4. The nature and location of other potentially affected facilities; and
5. An analysis and procedure to ensure that doses comply with R12-1-407(B), and are within the dose limits in this Article.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-436. Disposal by Release into Sanitary Sewerage System

- A.** A licensee may discharge licensed material into sanitary sewerage if each of the following conditions is satisfied:
1. The material is readily soluble or is readily dispersible biological material, in water;
 2. The quantity of licensed radioactive material that the licensee releases into the sewer in one month divided by the average monthly volume of water released into the sewer by the licensee or registrant does not exceed the concentration listed in Appendix B, Table III,
 3. If more than one radionuclide is released, the following conditions shall also be satisfied:
 - a. The licensee shall determine the fraction of the limit in Appendix B, Table III represented by discharges

into sanitary sewerage by dividing the actual monthly average concentration of each radionuclide released by the licensee or registrant into the sewer by the concentration of that radionuclide listed in Appendix B, Table III, and

- b. The sum of the fractions for each radionuclide required by subsection (A)(3)(a) does not exceed unity; and
 - c. The total quantity of licensed radioactive material that the licensee releases into the sanitary sewerage in a year does not exceed 185 GBq (5 Ci) of Hydrogen-3, 37 GBq (1 Ci) of Carbon-14, and 37 GBq (1 Ci) of all other radioactive materials combined.
- B.** Excreta from individuals undergoing medical diagnosis or therapy with radioactive material are not subject to the limitations contained in subsection (A).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-437. Treatment or Disposal by Incineration

A licensee shall treat or dispose of licensed material by incineration only in the amounts and forms specified in R12-1-438 or as specifically approved by the Agency according to R12-1-435.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-438. Disposal of Specific Wastes

- A.** A licensee may dispose of the following licensed material as if it were not radioactive:
1. 1.85 kBq (0.05 μ Ci), or less, of Hydrogen-3 or Carbon-14 per gram of medium used for liquid scintillation counting; and
 2. 1.85 kBq (0.05 μ Ci), or less, of Hydrogen-3 or Carbon-14 per gram of animal tissue, averaged over the weight of the entire animal.
 3. 1.85 kBq (0.05 μ Ci), or less, of Iodine-125 per gram of medium used in analyzing in vitro laboratory samples and associated sample holders contaminated during the laboratory procedure.
- B.** A licensee shall not dispose of tissue, contaminated with radioactive material, according to subsection (A)(2) in a manner that would permit its use either as food for humans or as animal feed.
- C.** A licensee may hold radioactive material with a physical half-life of less than or equal to 120 days for decay in storage before disposal without regard to its radioactivity, and is exempt from the requirements of R12-1-434, provided:
1. The licensee monitors the radioactive material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and
 2. The licensee removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee.
- D.** The licensee shall maintain records in accordance with R12-1-441.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended

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by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-438.01 Disposal of Certain Radioactive Material

- A.** Licensed material as defined in the definition of radioactive material in R12-1-102 may be disposed of in accordance with this Article, even though it is not defined as low-level radioactive waste. Therefore, any licensed radioactive material being disposed of at a facility, or transferred for ultimate disposal at a facility licensed by the Agency, must meet the requirements of R12-1-439.
- B.** A licensee may dispose of radioactive material, as defined in the definition of radioactive material in R12-1-102, at a disposal facility authorized to dispose of such material in accordance with any federal or state solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005.

Historical Note

Section R12-1-438.01 made by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-439. Transfer for Disposal and Manifests

- A.** Any licensee shipping radioactive waste intended for ultimate disposal at a licensed land disposal facility (for purposes of this rule "land disposal facility" means the land, buildings, structures, and equipment that are intended to be used for the disposal of radioactive waste. A geologic repository is not a land disposal facility) shall comply with 10 CFR 20.2006 and 10 CFR 20 Appendix G, published January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- B.** An authorized representative of the waste generator shall provide the certification required in 10 CFR 20, Appendix G, Section II, which is incorporated by reference under subsection (A).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-440. Compliance with Environmental and Health Protection Regulations

Nothing in R12-1-434, R12-1-435, R12-1-436, R12-1-437, R12-1-438, or R12-1-439 relieves the licensee from complying with other applicable federal, state, and local rules or regulations governing any other toxic or hazardous properties of materials that may be disposed of according to the rules listed in Article 4 of this Chapter.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-441. Records of Waste Disposal

- A.** Each licensee shall maintain records of the disposal of licensed materials made in accordance with R12-1-435, R12-1-436, R12-1-437, R12-1-438, and disposal by burial in soil, including burials authorized before February 25, 1985.
- B.** The licensee shall retain the records required by subsection (A) until the Agency terminates each pertinent license requiring the record. The licensee shall provide for the disposition of these records prior to license termination.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-442. Agency Inspection of Shipments of Waste

Each shipment of waste to a disposal facility, licensed under R12-1-1302(D)(11), is subject to inspection by the Agency before shipment or transportation. The waste shipper shall notify the Agency not less than five working days before the scheduled shipment or transportation of waste to a licensed disposal facility.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-443. Reports of Stolen, Lost, or Missing Licensed or Registered Sources of Radiation

- A.** Each licensee or registrant shall report to the Agency by telephone as follows:
1. Immediately after it becomes known to the licensee that licensed radioactive material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in Appendix C is stolen, lost, or missing under circumstances that indicate to the licensee that an exposure could result to individuals in unrestricted areas;
 2. Within 30 days after it becomes known to the licensee that licensed radioactive material in an aggregate quantity greater than 10 times the quantity specified in Appendix C is stolen, lost, or missing, and is still missing.
 3. Immediately after it becomes known to the registrant that a radiation machine is stolen, lost, or missing.
- B.** Each licensee or registrant required to make a report according to subsection (A) shall, within 30 days after making the telephone report, make a written report to the Agency that contains the following information:
1. A description of the licensed or registered source of radiation involved, including, for radioactive material, the kind, quantity, and chemical and physical form; and, for radiation machines, the manufacturer, model, serial number, type, and maximum energy of radiation emitted;
 2. A description of the circumstances under which the loss or theft occurred;
 3. A statement of disposition, or probable disposition, of the licensed or registered source of radiation;
 4. Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas;
 5. Actions that have been taken, or will be taken, to recover the source of radiation; and
 6. Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed or registered sources of radiation.
- C.** After filing the written report, the licensee or registrant shall also report additional substantive information on the loss or theft within 30 days after the licensee or registrant learns of the information.
- D.** The licensee or registrant shall provide the Agency with the names of individuals who may have received an exposure to radiation as a result of an incident reported to the Agency under subsection (B).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective

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June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-444. Reports of Exposures, Radiation Levels, and Concentrations of Radioactive Material Exceeding the Limits

- A.** In addition to the notification required by R12-1-445, each licensee or registrant shall submit a written report within 30 days after learning of any of the following:
1. Incidents for which notification is required by R12-1-445;
 2. Doses in excess of any of the following:
 - a. The occupational dose limits for adults in R12-1-408;
 - b. The occupational dose limits for a minor in R12-1-414;
 - c. The limits for an embryo or fetus of a declared pregnant woman in R12-1-415;
 - d. The limits for an individual member of the public in R12-1-416;
 - e. Any applicable limit in the license or registration; or
 - f. The ALARA limit on air emissions in R12-1-407;
 3. Levels of radiation or concentrations of radioactive material in:
 - a. A restricted area in excess of applicable limits in the license or registration, or
 - b. An unrestricted area in excess of 10 times the applicable limit in this Article or in the license or registration, whether or not this involves an exposure of any individual to a dose in excess of the limits in R12-1-416;
 4. Radiation levels or concentrations of radioactive material in excess of the standards in 40 CFR 190, 2003 edition, published July 1, 2003, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408 which is incorporated by reference and on file with the Agency, if the licensee is subject to these federal standards, or there is a license condition referencing the 40 CFR 190 standards. This incorporation by reference contains no future editions or amendments.
- B.** Contents of reports.
1. Each report shall contain a description of each individual's exposure to radiation and radioactive material, including as applicable:
 - a. Estimates of each individual's dose;
 - b. The levels of radiation and concentrations of radioactive material involved;
 - c. The cause of the elevated exposures, dose rates, or concentrations; and
 - d. Corrective steps taken or planned to ensure against a recurrence, including the schedule for achieving conformance with applicable limits, generally applicable environmental standards, and associated license or registration conditions.
 2. Each report filed according to subsection (A) shall include for each occupationally overexposed individual: name, Social Security number, and date of birth. With respect to the limit for an embryo or fetus in R12-1-415, the identifiers in the report should be those of the declared pregnant woman. The report shall be prepared so that information regarding each overexposed individual is stated in a separate and detachable part of the report.
- C.** All licensees or registrants who make reports according to subsection (A) shall submit the report in writing to the Agency.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-445. Notification of Incidents

- A.** Immediate notification: Each licensee or registrant shall immediately report to the Agency any event involving a radiation source that may have caused or threatens to cause any of the following conditions:
1. An individual to receive:
 - a. A total effective dose equivalent of 0.25 Sv (25 rem) or more;
 - b. A lens dose equivalent of 0.75 Sv (75 rem) or more; or
 - c. A shallow-dose equivalent to the skin or extremities of 2.5 Gy (250 rads) or more; or
 2. The release of radioactive material, inside or outside of a restricted area, so if an individual had been present for 24 hours, the individual could have received five times the annual limit on intake (this subsection do not apply to a location where personnel are not normally stationed during routine operations, such as a hot-cell or process enclosure).
- B.** Twenty-four hour notification: Each licensee or registrant shall, within 24 hours of discovery of the event, report to the Agency any event involving loss of control of a radiation source possessed by the licensee or registrant that may have caused, or threatens to cause, any of the following conditions:
1. An individual to receive, in a period of 24 hours
 - a. A total effective dose equivalent exceeding 0.05 Sv (5 rem);
 - b. A lens dose equivalent exceeding 0.15 Sv (15 rem); or
 - c. A shallow-dose equivalent to the skin or extremities exceeding 0.5 Gy (50 rads); or
 2. The release of radioactive material, inside or outside of a restricted area, so, if an individual had been present for 24 hours, the individual could have received an intake in excess of one occupational annual limit of intake (this subsection does not apply to a location where personnel are not normally stationed during routine operations, such as a hot-cell or process enclosure).
- C.** A licensee or registrant shall prepare any report filed with the Agency according to this Section so that names of individuals who have received exposure to radiation or radioactive material are stated in a separate and detachable part of the report.
- D.** A licensee or registrant shall report to the Agency by telephone in response to the requirements of this Section.
- E.** If the Agency does not respond to the initial telephone call, the licensee or registrant shall report to the Department of Public Safety and continue with reasonable efforts to contact the Agency Duty Officer until contact is made.
- F.** The provisions of this Section do not apply to a dose that results from a planned special exposure, if the dose is within the limits for planned special exposures and reported according to R12-1-413(C).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-446. Notifications and Reports to Individuals

- A.** Requirements for notification and reports to individuals of exposure to radiation or radioactive material are specified in R12-1-1004.
- B.** In addition to the reporting requirements in R12-1-444 and R12-1-445, each licensee or registrant shall notify the individual exposed to radiation or radioactive material. The notice to the exposed individual shall be provided no later than the date

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the report is submitted to the Agency and shall comply with R12-1-1004(A).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).
Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).
Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-447. Vacating Premises

- A. If a facility has been used for activities involving radioactive material a licensee shall notify the Agency in writing of the intent to vacate the facility no less than 45 days before relinquishing possession or control of the facility.
- B. If a facility is contaminated with radioactive material, a licensee vacating the facility shall decontaminate it using Agency-approved procedures.
- C. The Agency shall inspect a vacated facility to determine whether it is contaminated with radioactive material.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).
Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-448. Additional Reporting

- A. Each licensee shall notify the Agency as soon as possible, but not later than four hours after the discovery of an event, and take immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed the limits specified in this Chapter or releases of licensed material that could exceed the limits specified in this Chapter. For purposes of this Section, event means a radiation accident involving a fire, explosion, gas release, or similar occurrence.
- B. Each licensee shall notify the Agency within 24 hours after discovering any of the following events involving licensed material:
 1. A contamination event that:
 - a. Requires that anyone having access to the contaminated area be restricted for more than 24 hours by the imposition of additional radiological controls to prohibit entry into the area; and
 - b. Involves a quantity of radioactive material greater than five times the lowest annual limit on intake specified in Appendix B of this Article; and
 - c. Results in access to the contaminated area being restricted for a reason other than to allow radionuclides with a half-life of less than 24 hours to decay prior to decontamination.
 2. An event in which equipment is disabled or fails to function as designed when:
 - a. The equipment is part of a system designed to prevent releases exceeding the limits specified in this Chapter, to prevent exposures to radiation and radioactive materials exceeding limits specified in this Chapter, or to mitigate the consequences of an accident; and
 - b. The equipment performs a safety function; and
 - c. No redundant equipment is available and operable to perform the required safety function.
 3. An event that requires urgent medical treatment of an individual with radioactive contamination on the individual's clothing or body.

4. A fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:
 - a. The quantity of material involved is greater than five times the lowest annual limit on intake specified in Appendix B of this Article, and
 - b. The damage affects the integrity of the licensed material or its container.
- C. Each licensee shall make reports required by subsections (A) and (B) above by telephone to the Agency. To the extent that the information is available at the time of notification, the information provided in these reports shall include:
 1. The callers's name and call back telephone number;
 2. A description of the event, including date and time;
 3. The exact location of the event;
 4. The isotopes, quantities, and chemical and physical form of the licensed material involved; and
 5. Any personnel radiation exposure data available.
- D. Each licensee who makes a report required by subsection (A) or (B) shall submit to the Agency a written follow-up report within 30 days of the initial report. Written reports prepared as required by other rules may be submitted to fulfill this requirement if the reports contain all of the required information in this subsection. The report shall include the following:
 1. A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;
 2. The exact location of the event;
 3. The isotopes, quantities, and chemical and physical form of the licensed material involved;
 4. Date and time of the event;
 5. Corrective actions taken or planned and the results of any evaluations or assessments; and
 6. The extent of personnel exposure to radiation or to radioactive materials without identification of each exposed individual by name.

Historical Note

Adopted effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-449. Survey Instruments and Pocket Dosimeters

- A. Each licensee or registrant shall ensure that survey instruments used to show compliance with this Article have been calibrated before first use, annually, and following repair, unless otherwise specified in this Chapter.
- B. To satisfy the requirements of subsection (A), the licensee or registrant shall:
 1. For each scale to be calibrated, calibrate two readings separated by at least 50 percent of scale rating; and
 2. Conspicuously note on the instrument the apparent radiation level, in appropriate units for the type of survey instrument being used and the date of calibration.
- C. Each licensee or registrant shall check each survey instrument for proper operation with the dedicated check source after calibration and before each use.
- D. The licensee or registrant shall retain a record of each calibration required in subsection (A) for three years. The record shall include:
 1. A description of the calibration procedure; and
 2. A description of the source used, the certified dose rates from the source, the rates indicated by the instrument being calibrated, the correction factors deduced from the calibration data, the signature of the individual who performed the calibration, and the date of calibration.

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- E. To meet the requirements of subsections (A), (B), and (C), the licensee or registrant may obtain the services of persons licensed or registered by the Agency, the NRC, an Agreement State, or a Licensing State to perform calibrations of survey instruments. Licensing records of the service person authorization shall be maintained for three years by the licensee or registrant obtaining the service.
- F. Each licensee or registrant shall ensure that pocket dosimeters used to show compliance with this Article:
1. Have been evaluated for proper operation annually and following repair, using a procedure acceptable to the Agency, unless a more frequent evaluation is required by license condition (Unless the dosimeter is electronic, the evaluation of the dosimeter shall include a drift test over a 24-hour period.); and
 2. Meet the performance criteria listed in R12-1-523(C) and R12-1-1130(C).
- G. Records of personnel dosimeter operational checks shall be maintained for three years.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-450. Sealed Sources

- A. A licensee shall only receive, possess, and use radioactive materials contained in a sealed source that has been manufactured, labeled, packaged, and distributed in accordance with a specific license for its manufacture and distribution. The license to manufacture and distribute a sealed source shall be issued by the Agency, U.S. Nuclear Regulatory Commission, a Licensing State, or another Agreement State.
- B. A licensee who possesses and uses a sealed source, or any device or equipment that contains a sealed source, shall follow the radiation safety and handling instructions approved by the Agency or follow the radiation safety and handling instructions furnished by the manufacturer on the label attached to the source, on the permanent container of the source, or in a leaflet or brochure that accompanies the source, and maintain the instructions in a legible and conveniently available form. If the handling instructions, leaflet, or brochure is no longer available and a copy cannot be obtained from the manufacturer, the licensee shall notify the Agency that the source handling information is no longer available.
- C. Inventories:
1. An inventory shall be conducted at intervals not to exceed six months, unless a shorter interval is specified by license condition.
 2. The records of the inventory shall be maintained for three years from the date of the inventory, and shall be available for inspection by the Agency.
 3. The information recorded shall include:
 - a. The kind and quantity of radioactive material,
 - b. The model and serial number of the source or the device in which it is mounted,
 - c. The location of the sealed source,
 - d. The date of the inventory, and
 - e. The signature of the person performing the inventory.
- D. Any licensee who possesses and uses sealed sources in the practice of medicine shall conduct a physical inventory according to the requirements in 12 A.A.C. 1, Article 7.
- E. Sealed sources, containing radioactive material, shall not be opened unless authorized by license condition.
- F. Sealed sources and machines, devices, or equipment containing sealed sources shall be used in accordance with procedures described in the manufacturer's instructions and the safety precautions described in the Nuclear Regulatory Commission Sealed Sources and Device Registry, unless the instructions or precautions conflict with these rules or license condition.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-451. Termination of a Radioactive Material License or a Licensed Activity

- A. As the final step before terminating a radioactive material use program licensed under R12-1-312, the licensee shall:
1. Certify to the Agency the disposition of all licensed material, including accumulated wastes, by submitting a complete description of a disposal plan with signed receipts from all licensed persons receiving the licensed material; and
 2. Conduct a radiation survey of the premises where the licensed activities were carried out to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-452 and submit to the Agency a report of the results of this survey, unless the licensee demonstrates in some other manner acceptable to the Agency that the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-452.
- B. Before terminating a licensed program, each licensee authorized to possess radioactive material with a half-life greater than 120 days, in any unsealed form, shall forward the following records to the Agency:
1. Records of disposal of the licensed material required by R12-1-435, R12-1-436, R12-1-437, and R12-1-438; and
 2. Records required by R12-1-418(D)(2)(d).
- C. If a licensed activity is transferred or assigned in accordance with subsection (E), each licensee authorized to possess radioactive material with a half-life greater than 120 days, in any unsealed form, shall transfer the following records to the new licensee and the new licensee shall maintain these records until the license is terminated:
1. Records of disposal of licensed material required by R12-1-435, R12-1-436, R12-1-437, and R12-1-438; and
 2. Records required by R12-1-418(D)(2)(d).
- D. Before the Agency terminates a license, each licensee shall forward the records required by subsection (E) to the Agency.
- E. A person licensed under R12-1-312 shall maintain required records regarding decommissioning of a facility in a location identified on the license until the Agency releases the site for unrestricted use. Before transfer or assignment of licensed activities, a licensee shall transfer all records required by this Section to the transferee. If records relating to facility decommissioning are kept for other purposes, the transferee shall refer to these records and provide their location on the transferee's application for a license. The transferee shall maintain the records until the Agency terminates the transferee's new license. The new licensee shall maintain the following decommissioning records for Agency review:
1. Records of spills or other occurrences involving the spread of contamination in and around the facility, equipment, or site. The licensee shall maintain a record of any instance when contamination remains after cleanup procedures or there is a reasonable likelihood that a contami-

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nant has spread to an inaccessible area, as in the case of possible seepage into porous material such as concrete. These records shall include any known information that identifies any radionuclide involved and its quantity, form, and concentration.

2. As-built drawings showing modifications of structures and equipment in restricted areas where radioactive materials are used or stored, and locations of possible inaccessible contamination, such as buried pipes. If as-built drawings are referenced, the licensee need not index each relevant document individually. If drawings are not available, the licensee shall provide records with known information concerning these areas and locations, as prescribed in subsection (E)(1).
3. Except for areas that contain depleted uranium used only for shielding or as penetrators in unused munitions, a list, contained in a single document and updated every two years, of the following:
 - a. Any area designated or formerly designated as a restricted area as defined under R12-1-102;
 - b. Any area outside of a restricted area for which documentation is required under subsection (B)(1);
 - c. Any area outside of a restricted area where wastes have been buried;
 - d. Any area outside of a restricted area that contains regulated radioactive material that will require the licensee to either decontaminate the area for decommissioning under R12-1-452 or obtain disposal approval under R12-1-435; and
 - e. Any restricted area where wastes have been buried.
4. Records of the cost estimate performed for the decommissioning funding plan or the amount certified by the Agency for decommissioning and the method for assuring funding, if either a funding plan or certification is used.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-452. Radiological Criteria for License Termination**A. General provisions and scope:**

1. The criteria in this Section apply to the decommissioning of facilities licensed under Article 3 of this Chapter. The criteria do not apply to uranium and thorium recovery facilities already subject to 10 CFR 40, Appendix A, or to uranium solution extraction facilities.
2. The criteria in this Section do not apply to sites that:
 - a. Have been decommissioned before the effective date of this Section; or
 - b. Have previously submitted and received Agency approval of a license termination plan (LTP) or decommissioning plan.
3. If a site has been decommissioned and the license terminated in accordance with the criteria in this Section, the Agency shall not require additional cleanup unless, based on new information, the Agency determines that the criteria of this Section were not met and residual radioactivity at the site is a threat to public health and safety.
4. When calculating the TEDE for the average member of the critical group, a licensee shall use the peak annual dose expected within the first 1000 years after decommissioning.

B. Radiological criteria for unrestricted use. The Agency considers a site acceptable for unrestricted use if the licensee reduces residual radioactivity, distinguishable from background radiation, to a TEDE for an average member of the critical group

that does not exceed 0.15 mSv (15 mrem) per year, including radiation from groundwater sources of drinking water, and the residual radioactivity is as low as reasonably achievable (ALARA). To determine the level that is ALARA, the Agency and the licensee shall take into account any detriment, such as deaths from transportation accidents, that is likely to result from decontamination and waste disposal.

- C. Criteria for license termination under restrictive conditions.** The Agency considers a site acceptable for license termination if the licensee meets all of the following restrictive conditions:
1. The licensee demonstrates that a reduction in residual radioactivity, necessary to comply with subsection (B), will result in net public or environmental harm or is not being made because the residual level of radioactivity is ALARA. To determine the level that is ALARA, the Agency and the licensee shall take into account any detriment, such as deaths from transportation accidents, that is likely to result from decontamination and waste disposal;
 2. The licensee establishes one or more legally enforceable institutional controls that reduce residual radioactivity, distinguishable from background radiation, to a TEDE for the average member of the critical group that does not exceed (0.15 mSv) 15 mrem per year, including radiation from groundwater sources of drinking water;
 3. The licensee demonstrates financial assurance that complies with R12-1-323(C), which enables an independent third party, including a governmental custodian of the site, to assume and carry out responsibilities for control and maintenance of the site and funds placed into a trust segregated from the licensee's assets and outside the licensee's administrative control, and in which the adequacy of the trust funds is to be assessed based on an assumed annual 1 percent real rate of return on investment;
 4. The licensee submits a decommissioning plan or License Termination Plan (LTP) to the Agency, indicating the licensee's intent to decommission in accordance with R12-1-323 and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or decommissioning plan how comments from individuals and institutions in the community, who may be affected by the decommissioning, have been sought and addressed after analysis.
 - a. If a licensee is restricting use of the site, the licensee shall seek comments from the public concerning the proposed decommissioning, regarding all of the following matters:
 - i. Whether the institutional controls proposed by the licensee will reduce residual radioactivity, distinguishable from background radiation, to a TEDE for the average member of the critical group that does not exceed 0.15 mSv (15 mrem) per year; are enforceable; and do not impose an unreasonable burden on the local community or other affected parties; and
 - ii. Whether the licensee has provided financial assurance that complies with R12-1-323(C), which enables an independent third party, including a governmental custodian of the site, to assume and carry out responsibilities for control and maintenance of the site;
 - b. In seeking comments on the issues identified in subsection (C)(4)(a), the licensee shall provide for:
 - i. Participation by representatives of a broad cross section of community interests that may be affected by the decommissioning;

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- ii. An opportunity for a comprehensive discussion of the issues by all of the community representatives; and
 - iii. A publicly available document that contains or access to each oral and written comment that reflects the viewpoints of community representatives on each issue and the extent of agreement or disagreement among representatives on each issue; and
5. The licensee reduces residual radioactivity, distinguishable from background radiation, at the site so that if the institutional controls are no longer in effect, the TEDE for the average member of the critical group is as low as reasonably achievable and does not exceed 1 mSv (100 mrem) per year; unless the licensee:
- a. Demonstrates that a further reduction in residual radioactivity necessary to comply with subsection (C)(5) is not technically achievable or economically feasible, or will result in net public or environmental harm;
 - b. Provides for durable institutional controls; and
 - c. Provides financial assurance that complies with R12-1-323(C), which enables an independent third party, including a governmental custodian of the site, to carry out periodic rechecks of the site, no less frequently than every five years; assures that each institutional control remains in place according to subsection (C)(3); and assumes and carries out responsibilities for maintenance of the institutional control.
- D. Alternate criteria for license termination:**
- 1. Based on circumstances that relate to a specific license, the Agency may terminate the license using the following alternate criteria for subsections (B) or (C)(2), if the licensee demonstrates that the TEDE from residual radioactivity, distinguishable from background radiation, for an average member of the critical group does not exceed 0.15 mSv (15 mrem) per year, and if the licensee:
 - a. Ensures that public health and safety is protected by submitting an analysis of possible sources of exposure, prepared by an independent qualified expert, which indicates whether it is likely that the dose from all human-made sources combined, other than medical sources, is more than the 1 mSv/y (100 mrem/y) limit in R12-1-416;
 - b. Employs to the extent practicable, restrictions on site use, according to the provisions of subsection (C) to minimize exposures at the site;
 - c. Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal; and
 - d. Submits a decommissioning plan or License Termination Plan (LTP) to the Agency that indicates the licensee's intent to decommission in accordance with R12-1-323, and specifies that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan or LTP how comments from individuals and institutions in the community, who may be affected by the decommissioning, have been sought and addressed after analysis. In seeking comments, the licensee shall provide for:
 - i. Participation by representatives of a broad cross section of community interests that may be affected by the decommissioning;
 - ii. An opportunity for a comprehensive discussion of the issues by all of the community representatives; and
 - iii. A publicly available document that contains or access to each oral and written comment that reflects viewpoints of community representatives on each issue and the extent of agreement and disagreement among the representatives on each issue.
 - 2. The use of alternate criteria to terminate a license requires approval by the Agency after consideration of any comments provided by the U.S. Environmental Protection Agency and any public comments submitted under subsection (E).
- E. Public notification and public participation:**
- 1. Upon the receipt of an LTP or decommissioning plan from a licensee, or a proposal by a licensee for release of a site under subsection (C) or (D), or whenever the Agency determines that notice will serve the public interest, the Agency shall notify and solicit comments from:
 - a. Local and state governments in the vicinity of the site and any Indian Nation or other indigenous people that have treaty or statutory rights that could be affected by the decommissioning; and
 - b. The U.S. Environmental Protection Agency.
 - 2. To comply with subsection(E)(1) the Agency shall publish a notice in a local newspaper, send letters to state or local organizations on its mailing list, hold a public hearing that is readily accessible to individuals in the vicinity of the site, and solicit comments from the public.
- F. Minimization of contamination.** After the effective date of this Section, an applicant for a license, other than a renewal, shall describe in the application how facility design and procedures for operation will facilitate eventual decommissioning and minimize, to the extent practicable, the generation of radioactive waste and contamination of the facility and the environment.
- 1. Applicants for standard design certifications, standard design approvals, and manufacturing licenses shall describe in the application how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.
 - 2. Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in this Article and radiological criteria for license termination in this Article.
- G. The Agency considers a site acceptable for unrestricted use if the residual radioactivity, distinguishable from background radiation, is equal to or less than the values in Table 1.**

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

Table 1. Acceptable Surface Contamination Levels

Radionuclide ¹	Average ^{2,3}	Maximum ^{2,4}	Removable ^{2,5}
U-nat, U-235, U-238, and associated decay products	5,000 dpm/100 cm ²	15,000 dpm/100cm ²	1,000 dpm/100 cm ²
Transuranics, Ra-226, Ra-228, Th-230, Pa-231, Ac-227, I-125, I-129	100dpm/100cm ²	300 dpm/100cm ²	20dpm/100cm ²
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100cm ²	3000 dpm/100cm ²	200 dpm/100cm ²
Beta-gamma (Exceptions noted above)	5,000 dpm/100 cm ²	15,000 dpm/100cm ²	1,000 dpm/100 cm ²

¹ Where surface contamination by both alpha-and beta-gamma-emitting radionuclides exists, the limits established for alpha-and beta-gamma-emitting radionuclides apply independently.

² As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed on an instrument calibrated for background, efficiency, and geometric factors associated with the instrumentation, in accordance with R12-1-449.

³ Measurements of average contamination level shall not be averaged over more than one square meter. For objects of less surface area, the average shall be derived for each object.

⁴ The maximum contamination level applies to an area of not more than 100 cm².

⁵ The amount of removable radioactive material per 100 cm² of surface area shall be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an instrument calibrated in accordance with R12-1-449. When removable contamination on objects of surface area A (where A is less than 100 sq. cm) is determined, the entire surface shall be wiped and the contamination level multiplied by 100/A to convert to a "per 100 sq. cm" basis.

Historical Note

Table 1 made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-453. Reports to Individuals of Exceeding Dose Limits

Any licensee or registrant that reports a personnel exposure to the Agency in accordance with R12-1-413(A)(6), R12-1-444, or R12-1-452 shall:

1. Notify the exposed individual of the exposure addressed in the report; and

2. Transmit the report to the exposed individual at the same time the Agency is notified of the exposure.

Historical Note

New Section made by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-454. Nationally Tracked Sources

- A. A licensee who manufactures, receives, transfers, disassembles, or disposes of a nationally tracked source shall complete and submit to the Nuclear Regulatory Commission's National Source Tracking System and the Agency, a National Source Tracking Transaction Report that contains the information required in 10 CFR 20.2207(a) through (e), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The report shall be submitted by the close of the next business day after the transaction using a reporting method specified in 10 CFR 20.2207(f), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- B. The initial National Source Tracking Transaction Report shall contain the information required in subsection (A), be submitted using a method specified in 10 CFR 20.2207(f) and include the additional information required by 10 CFR 20.2207(h)(1) through (6), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C. A licensee shall correct any error in previously filed National Source Tracking Transaction Reports or file a new report for any missed transaction within five business days of the discovery of the error or missed transaction in accordance with 10 CFR 20.2207(g), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- D. A licensee who receives a nationally tracked sealed source shall not disassemble the source unless specifically authorized to do so by the Agency.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-455. Security Requirements for Portable Gauges

- A. A licensee that uses a portable gauge shall use a minimum of two independent controls to maintain security while:
 1. Transporting a portable gauge; and
 2. Storing a portable gauge.
- B. Each control shall form a tangible barrier that will prevent unauthorized removal whenever a portable gauge is not under the control and constant surveillance of the licensee.
- C. A licensee shall employ controls approved by the Agency.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

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Appendix A. Assigned Protection Factors for Respirators^a

	Operating mode	Assigned Protection Factors
I. Air Purifying Respirators [Particulate ^b only] ^c :		
Filtering face piece disposable ^d	Negative	(^d)
Face piece, half ^e	Negative Pressure	10
Face piece, full	Negative Pressure	100
Face piece, half	Powered Air-purifying Respirators	50
Face piece, full	Powered Air-purifying Respirators	1000
Helmet/hood	Powered Air-purifying Respirators	1000
Face piece, loose-fitting	Powered Air-purifying Respirators	25
II. Atmosphere supplying respirators [particulate, gases and vapors ^f]:		
1. Air-line respirator:		
Face piece, half	Demand	10
Face piece, half	Continuous Flow	50
Face piece, half	Pressure Demand	50
Face piece, full	Demand	100
Face piece, full	Continuous Flow	1000
Face piece, full	Pressure Demand	1000
Helmet/hood	Continuous Flow	1000
Face piece, loose-fitting	Continuous Flow	25
Suit	Continuous Flow	(^g)
2. Self-contained breathing Apparatus (SCBA):		
Face piece, full	Demand	^h 100
Face piece, full	Pressure Demand	^h 10,000
Face piece, full	Demand, Recirculating	^h 100
Face piece, full	Positive Pressure Recirculating	^h 10,000
III. Combination Respirators:		
Any combination of air-purifying and atmosphere-supplying respirators	Assigned protection factor for type and mode of operation as listed above	

^a These assigned protection factors apply only in a respiratory protection program that meets the requirements of this Article. They are applicable only to airborne radiological hazards and may not be appropriate if chemical or other respiratory hazards exist instead of, or in addition to, radioactive hazards. A licensee shall comply with Department of Labor regulations, regarding selection and use of respirators for those circumstances.

Radioactive contaminants for which the concentration values in Table 1, Column 3 of Appendix B are based on internal dose due to inhalation may, in addition, present external exposure hazards at higher concentrations. Under these circumstances, limitations on occupancy may have to be governed by external dose limits.

^b A licensee shall equip air purifying respirators of APF<100 with particulate filters that are at least 95 percent efficient. The licensee shall equip air purifying respirators of APF=100 with particulate filters that are at least 99 percent efficient. The licensee shall equip air purifying respirators of APF>100 with particulate filters that are at least 99.97 percent efficient.

^c A licensee may apply to the Commission for the use of an APF greater than 1 for sorbent cartridges as protection against airborne radioactive gases and vapors, similar to radioiodine.

^d A Licensee may permit an individual to use this type of respirator if the individual has not been medically screened or fit tested on the device, provided that no credit is taken for use of these respirators in estimation of intake or dose. It is also recognized that it is difficult to perform an effective positive or negative pressure pre-use user seal check on this type of device. All other respiratory protection program requirements listed in 10 CFR 20.1703, January 2000 Edition, and published January 1, 2000, apply and are incorporated by reference and available for review at the Agency and Secretary of State. This incorporation by reference contains no future editions or amendments. There is no assigned protection factor for these devices. However, a licensee may use an APF equal to 10 if the licensee can demonstrate a fit factor of at least 100 by use of a validated or evaluated, qualitative or quantitative fit test.

^e Under-chin type only. No distinction is made in this appendix between elastomeric half-masks with replaceable cartridges and those designed with the filter medium as an integral part of the face piece (disposable or reusable disposable). Both types are acceptable as long as the seal area of the latter contains some substantial type of seal-enhancing material, such as rubber or plastic, two or more suspension straps are adjustable, the filter medium is at least 95 percent efficient, and all other requirements of this Article are met.

^f The assigned protection factors for gases and vapors are not applicable to radioactive contaminants that present an absorption or submersion hazard. For tritium oxide vapor, approximately one-third of the intake occurs by absorption through the skin so that an overall pro-

tection factor of 3 is appropriate when atmosphere-supplying respirators are used to protect against tritium oxide. Exposure to radioactive noble gases is not considered a significant respiratory hazard and protective actions for these contaminants should be based on external (submersion) dose considerations.

^g No NIOSH approval schedule is currently available for atmosphere supplying suits. This equipment may be used in an acceptable respiratory protection program as long as all the other minimum program requirements, with the exception of fit testing, are met. The minimum program requirements are provided in 10 CFR 20.1703.

^h The licensee shall implement institutional controls to assure that these devices are not used in areas immediately dangerous to life or health (IDLH).

ⁱ This type of respirator may be used as an emergency device in unknown concentrations for protection against inhalation hazards. External radiation hazards and other limitations to permitted exposure such as skin absorption shall be taken into account in these circumstances. This device may not be used by any individual who experiences perceptible outward leakage of breathing gas while wearing the device.

Historical Note

Former Appendix A repealed; new Appendix A adopted effective June 30, 1977 (Supp. 77-3). Section repealed; new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

Appendix B. Annual Limits on Intake (ALI) and Derived Air Concentrations (DAC) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sanitary Sewerage

Introduction

For each radionuclide, Table I indicates the chemical form which is to be used for selecting the appropriate ALI or DAC value. The ALIs and DACs for inhalation are given for an aerosol with an activity median aerodynamic diameter (AMAD) of 1 μm , micron, and for three classes (D,W,Y) of radioactive material, which refer to their retention (approximately days, weeks, or years) in the pulmonary region of the lung. This classification applies to a range of clearance half-times for D if less than 10 days, for W from 10 to 100 days, and for Y greater than 100 days. Table II provides concentration limits for airborne and liquid effluents released to the general environment. Table III provides concentration limits for discharges to sanitary sewerage.

Note:

The values in Tables I, II, and III are presented in the computer "E" notation. In this notation a value of 6E-02 represents a value of 6×10^{-2} or 0.06, 6E+2 represents 6×10^2 or 600, and 6E+0 represents 6×10^0 or 6.

Table I "Occupational Values"

Note that the columns in Table I of this Appendix captioned "Oral Ingestion ALI," "Inhalation ALI," and "DAC" are applicable to occupational exposure to radioactive material.

The ALIs in this Appendix are the annual intakes of given radionuclide by "Reference Man" which would result in either (1) a committed effective dose equivalent of 0.05 Sv (5 rem), stochastic ALI, or (2) a committed dose equivalent of 0.5 Sv (50 rem) to an organ or tissue, nonstochastic ALI. The stochastic ALIs were derived to result in a risk, due to irradiation of organs and tissues, comparable to the risk associated with deep-dose equivalent to the whole body of 0.05 Sv (5 rem). The derivation includes multiplying the committed dose equivalent to an organ or tissue by a weighting factor, W_T . This weighting factor is the proportion of the risk of stochastic effects resulting from irradiation of the organ or tissue, T, to the total risk of stochastic effects when the whole body is irradiated uniformly. The values of W_T are listed under the definition of weighting factor in R12-1-403. The nonstochastic ALIs were derived to avoid nonstochastic effects, such as prompt damage to tissue or reduction in organ function.

A value of $W_T = 0.06$ is applicable to each of the five organs or tissues in the "remainder" category receiving the highest dose equivalents, and the dose equivalents of all other remaining tissues may be disregarded. The following portions of the GI tract --

stomach, small intestine, upper large intestine, and lower large intestine -- are to be treated as four separate organs.

Note that the dose equivalents for an extremity, skin, and lens of the eye are not considered in computing the committed effective dose equivalent but are subject to limits that shall be met separately.

When an ALI is defined by the stochastic dose limit, this value alone is given. When an ALI is determined by the nonstochastic dose limit to an organ, the organ or tissue to which the limit applies is shown, and the ALI for the stochastic limit is shown in parentheses. Abbreviated organ or tissue designations are used:

LLI wall	=	lower large intestine wall,
St. wall	=	stomach wall,
Blad wall	=	bladder wall, and
Bone surf	=	Bone surface.

The use of the ALIs listed first, the more limiting of the stochastic and nonstochastic ALIs, will ensure that nonstochastic effects are avoided and that the risk of stochastic effects is limited to an acceptably low value. If, in a particular situation involving a radionuclide for which the nonstochastic ALI is limiting, use of that nonstochastic ALI is considered unduly conservative, the licensee may use the stochastic ALI to determine the committed effective dose equivalent. However, the licensee shall also ensure that the 0.5 Sv (50 rem) dose equivalent limit for any organ or tissue is not exceeded by the sum of the external deep-dose equivalent plus the internal committed dose equivalent to that organ, not the effective dose. For the case where there is no external dose contribution, this would be demonstrated if the sum of the fractions of the nonstochastic ALIs (ALI_{ns}) that contribute to the committed dose equivalent to the organ receiving the highest dose does not exceed unity, that is, $\sum (\text{intake (in } \mu\text{Ci) of each radionuclide} / ALI_{ns}) \leq 1.0$. If there is an external deep dose equivalent contribution of H_d , then this sum must be less than $1 - (H_d/50)$, instead of ≤ 1.0 .

Note that the dose equivalents for an extremity, skin, and lens of the eye are not considered in computing the committed effective dose equivalent but are subject to limits that must be met separately.

The derived air concentration (DAC) values are derived limits intended to control chronic occupational exposures. The relationship between the DAC and the ALI is given by:

$$DAC = ALI(\text{in } \mu\text{Ci}) / (2000 \text{ hours per working year} \times 60 \text{ minutes/hour} \times 2 \times 10^4 \text{ ml per minute}) = [ALI / 2.4 \times 10^9] \mu\text{Ci/ml},$$

where 2×10^4 ml is the volume of air breathed per minute at work by Reference Man under working conditions of light work.

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The DAC values relate to one of two modes of exposure: either external submersion or the internal committed dose equivalents resulting from inhalation of radioactive materials. DACs based upon submersion are for immersion in a semi-infinite cloud of uniform concentration and apply to each radionuclide separately.

The ALI and DAC values include contributions to exposure by the single radionuclide named and any in-growth of daughter radionuclides produced in the body by decay of the parent. However, intakes that include both the parent and daughter radionuclides shall be treated by the general method appropriate for mixtures.

The values of ALI and DAC do not apply directly when the individual both ingests and inhales a radionuclide, when the individual is exposed to a mixture of radionuclides by either inhalation or ingestion or both, or when the individual is exposed to both internal and external irradiation. See R12-1-407. When an individual is exposed to radioactive materials which fall under several of the translocation classifications of the same radionuclide, such as Class D, Class W, or Class Y, the exposure may be evaluated as if it were a mixture of different radionuclides.

It should be noted that the classification of a compound as Class D, W, or Y is based on the chemical form of the compound and does not take into account the radiological half-life of different radionuclides. For this reason, values are given for Class D, W, and Y compounds, even for very short-lived radionuclides.

Table II "Effluent Concentrations"

The columns in Table II of this Appendix captioned "Effluents," "Air," and "Water" are applicable to the assessment and control of dose to the public, particularly in the implementation of the provisions of R12-1-415. The concentration values given in Columns 1 and 2 of Table II are equivalent to the radionuclide concentrations which, if inhaled or ingested continuously over the course of a year, would produce a total effective dose equivalent of 0.5 mSv (0.05 rem).

Consideration of nonstochastic limits has not been included in deriving the air and water effluent concentration limits because nonstochastic effects are presumed not to occur at or below the dose levels established for individual members of the public. For radionuclides, where the nonstochastic limit was governing in deriving the occupational DAC, the stochastic ALI was used in deriving the corresponding airborne effluent limit in Table II. For this reason, the DAC and airborne effluent limits are not always proportional as they were in earlier versions of Appendix A of Article 4.

The air concentration values listed in Table II, Column 1 were derived by one of two methods. For those radionuclides for which the stochastic limit is governing, the occupational stochastic inhalation ALI was divided by 2.4×10^9 , relating the inhalation ALI to the DAC, as explained above, and then divided by a factor of 300. The factor of 300 includes the following components: a factor of 50 to relate the 0.05 Sv (5 rem) annual occupational dose limit to the 0.1 rem limit for members of the public, a factor of 3 to adjust for the difference in exposure time and the inhalation rate for a worker and that for members of the public; and a factor of 2 to adjust the occupational values, derived for adults, so that they are applicable to other age groups.

For those radionuclides for which submersion, that is external dose, is limiting, the occupational DAC in Table I, Column 3 was divided by 219. The factor of 219 is composed of a factor of 50, as described above, and a factor of 4.38 relating occupational exposure for 2,000 hours per year to full-time exposure (8,760 hours per year). Note that an additional factor of 2 for age considerations is not warranted in the submersion case.

The water concentrations were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^7 . The factor of 7.3×10^7 (ml) includes the following components: the factors of 50 and 2 described above and a factor of 7.3×10^5 (ml) which is the annual water intake of Reference Man.

Note 2 of this Appendix provides groupings of radionuclides which are applicable to unknown mixtures of radionuclides. These groupings, including occupational inhalation ALIs and DACs, air and water effluent concentrations, and releases to sewer, require demonstrating that the most limiting radionuclides in successive classes are absent. The limit for the unknown mixture is defined when the presence of one of the listed radionuclides cannot be definitely excluded as being present either from knowledge of the radionuclide composition of the source or from actual measurements.

Table III "Releases to Sewers"

The monthly average concentrations for release to sanitary sewerage are applicable to the provisions in R12-1-435. The concentration values were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^6 (ml). The factor of 7.3×10^6 (ml) is composed of a factor of 7.3×10^5 (ml), the annual water intake by Reference Man, and a factor of 10, such that the concentrations, if the sewage released by the licensee were the only source of water ingested by a Reference Man during a year, would result in a committed effective dose equivalent of 0.5 rem.

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LIST OF ELEMENTS

<u>Name</u>	<u>Symbol</u>	<u>Atomic Number</u>	<u>Name</u>	<u>Symbol</u>	<u>Atomic Number</u>
Actinium	Ac	89	Mendelevium	Md	101
Aluminum	Al	13	Mercury	Hg	80
Americium	Am	95	Molybdenum	Mo	42
Antimony	Sb	51	Neodymium	Nd	60
Argon	Ar	18	Neptunium	Np	93
Arsenic	As	33	Nickel	Ni	28
Astatine	At	85	Niobium	Nb	41
Barium	Ba	56	Nitrogen	N	7
Berkelium	Bk	97	Osmium	Os	76
Beryllium	Be	4	Oxygen	O	8
Bismuth	Bi	83	Palladium	Pd	46
Bromine	Br	35	Phosphorus	P	15
Cadmium	Cd	48	Platinum	Pt	78
Calcium	Ca	20	Plutonium	Pu	94
Californium	Cf	98	Polonium	Po	84
Carbon	C	6	Potassium	K	19
Cerium	Ce	58	Praseodymium	Pr	59
Cesium	Cs	55	Promethium	Pm	61
Chlorine	Cl	17	Protactinium	Pa	91
Chromium	Cr	24	Radium	Ra	88
Cobalt	Co	27	Radon	Rn	86
Copper	Cu	29	Rhenium	Re	75
Curium	Cm	96	Rhodium	Rh	45
Dysprosium	Dy	66	Rubidium	Rb	37
Einsteinium	Es	99	Ruthenium	Ru	44
Erbium	Er	68	Samarium	Sm	62
Europium	Eu	63	Scandium	Sc	21
Fermium	Fm	100	Selenium	Se	34
Fluorine	F	9	Silicon	Si	14
Francium	Fr	87	Silver	Ag	47
Gadolinium	Gd	64	Sodium	Na	11
Gallium	Ga	31	Strontium	Sr	38
Germanium	Ge	32	Sulfur	S	16
Gold	Au	79	Tantalum	Ta	73
Hafnium	Hf	72	Technetium	Tc	43
Holmium	Ho	67	Tellurium	Te	52
Hydrogen	H	1	Terbium	Tb	65
Indium	In	49	Thallium	Tl	81
Iodine	I	53	Thorium	Th	90
Iridium	Ir	77	Thulium	Tm	69
Iron	Fe	26	Tin	Sn	50
Krypton	Kr	36	Titanium	Ti	22
Lanthanum	La	57	Tungsten	W	74
Lead	Pb	82	Uranium	U	92
Lutetium	Lu	71	Vanadium	V	23
Magnesium	Mg	12	Xenon	Xe	54
Manganese	Mn	25	Ytterbium	Yb	70
			Yttrium	Y	39
			Zinc	Zn	30
			Zirconium	Zr	40

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC (µCi/ml)	Col. 1 Air (µCi/ml)	Col. 2 Water (µCi/ml)	Monthly Average Concentration (µCi/ml)
			ALI (µCi)	ALI (µCi)				
1	Hydrogen-3	Water, DAC includes skin absorption	8E+4	8E+4	2E-5	1E-7	1E-3	1E-2
		Gas (HT or T ₂) Submersion ¹ : Use above values as HT and T ₂ oxidize in air and in the body to HTO.						
4	Beryllium-7	W, all compounds except those given for Y	4E+4	2E+4	9E-6	3E-8	6E-4	6E-3
		Y, oxides, halides, and nitrates	-	2E+4	8E-6	3E-8	-	-
4	Beryllium-10	W, see ⁷ Be	1E+3	2E+2	6E-8	2E-10	-	--
		LLI wall	(1E+3)	-	-	-	2E-5	2E-4
		Y, see ⁷ Be	-	1E+1	6E-9	2E-11	-	-
6	Carbon-11 ²	Monoxide	-	1E+6	5E-4	2E-6	-	-
		Dioxide	-	6E+5	3E-4	9E-7	-	-
		Compounds	4E+5	4E+ 5	2E-4	6E-7	6E-3	6E-2
6	Carbon-14	Monoxide	-	2E+6	7E-4	2E-6	-	-
		Dioxide	-	2E+5	9E-5	3E-7	-	-
		Compounds	2E+3	2E+3	1E-6	3E-9	3E-5	3E-4
7	Nitrogen-13 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
8	Oxygen-15 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
9	Fluorine-18 ²	D, fluorides of H, Li, Na, K, Rb, Cs, and Fr	5E+4	7E+4	3E-5	1E-7	-	-
		St wall	(5E+4)	-	-	-	7E-4	7E-3
		W, fluorides of Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, As, Sb, Bi, Fe, Ru, Os, Co, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, V, Nb, Ta, Mn, Tc, and Re	-	9E+4	4E-5	1E-7	-	-
		Y, Lanthanum fluoride	-	8E+4	3E-5	1E-7	-	-
11	Sodium-22	D, all compounds	4E+2	6E+2	3E-7	9E-10	6E-6	6E-5
11	Sodium-24	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
12	Magnesium-28	D, all compounds except those given for W	7E+2	2E+3	7E-7	2E-9	9E-6	9E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	1E+3	5E-7	2E-9	-	-
13	Aluminum-26	D, all compounds except those given for W	4E+2	6E+1	3E-8	9E-11	6E-6	6E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	9E+1	4E-8	1E-10	-	-
14	Silicon-31	D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and nitrates	-	3E+4	1E-5	5E-8	-	-
		Y, aluminosilicate glass	-	3E+4	1E-5	4E-8	-	-
14	Silicon-32	D, see ³¹ Si	2E+3	2E+2	1E-7	3E-10	-	-
		LLI wall	(3E+3)	-	-	-	4E-5	4E-4

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W, see ^{31}Si	-	1E+2	5E-8	2E-10	-	-
Y, see ^{31}Si	-	5E+0	2E-9	7E-12	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
15	Phosphorus-32	D, all compounds except phosphates given for W	6E+2	9E+2	4E-7	1E-9	9E-6	9E-5
		W, phosphates of Zn ²⁺ , S ³⁺ , Mg ²⁺ , Fe ³⁺ , Bi ³⁺ , and Lanthanides	-	4E+2	2E-7	5E-10	-	-
15	Phosphorus-33	D, see ³² P	6E+3	8E+3	4E-6	1E-8	8E-5	8E-4
		W, see ³² P	-	3E+3	1E-6	4E-9	-	-
16	Sulfur-35	Vapor	1E+4	6E-6	2E-8	-	-	-
		D, sulfides and sulfates except those given for W	1E+4	2E+4	7E-6	2E-8	-	-
		LLI wall	(8E+3)	-	-	-	1E-4	1E-3
		W, elemental sulfur, sulfides of Sr, Ba, Ge, Sn, Pb, As, Sb, Bi, Cu, Ag, Au, Zn, Cd, Hg, W, and Mo. Sulfates of Ca, Sr, Ba, Ra, As, Sb, and Bi	6E+3	2E+3	9E-7	3E-9	-	-
17	Chlorine-36	D, chlorides of H, Li, Na, K, Rb, Cs, and Fr	2E+3	2E+3	1E-6	3E-9	2E-5	2E-4
		W, chlorides of Lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, and Re	-	2E+2	1E-7	3E-10	-	-
17	Chlorine-38 ²	D, see ³⁶ Cl	2E+4	4E+4	2E-5	6E-8	-	-
		St wall	(3E+4)	-	-	-3E-4	3E-3	-
		W, see ³⁶ Cl	-	5E+4	2E-5	6E-8	-	-
17	Chlorine-39 ²	D, see ³⁶ Cl	2E+4	5E+4	2E-5	7E-8	-	-
		St wall	(4E+4)	-	-	-5E-4	5E-3	-
		W, see ³⁶ Cl	-	6E+4	2E-5	8E-8	-	-
18	Argon-37	Submersion ¹	-	-	1E+0	6E-3	-	-
18	Argon-39	Submersion ¹	-	-	2E-4	8E-7	-	-
18	Argon-41	Submersion ¹	-	-	3E-6	1E-8	-	-
19	Potassium-40	D, all compounds	3E+2	4E+2	2E-7	6E-10	4E-6	4E-5
19	Potassium-42	D, all compounds	5E+3	5E+3	2E-6	7E-9	6E-5	6E-4
19	Potassium-43	D, all compounds	6E+3	9E+3	4E-6	1E-8	9E-5	9E-4
19	Potassium-44 ²	D, all compounds	2E+4	7E+4	3E-5	9E-8	-	-
		St wall	(4E+4)	-	-	-	5E-4	5E-3
19	Potassium-45 ²	D, all compounds	3E+4	1E+5	5E-5	2E-7	-	-
		St wall	(5E+4)	-	-	-	7E-4	7E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
20	Calcium-41	W, all compounds	3E+3	4E+3	2E-6	-	-	-
			Bone surf (4E+3)	Bone surf (4E+3)	-	5E-9	6E-5	6E-4
20	Calcium-45	W, all compounds	2E+3	8E+2	4E-7	1E-9	2E-5	2E-4
20	Calcium-47	W, all compounds	8E+2	9E+2	4E-7	1E-9	1E-5	1E-4
21	Scandium-43	Y, all compounds	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
21	Scandium-44m	Y, all compounds	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
21	Scandium-44	Y, all compounds	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
21	Scandium-46	Y, all compounds	9E+2	2E+2	1E-7	3E-10	1E-5	1E-4
21	Scandium-47	Y, all compounds	2E+3	3E+3	1E-6	4E-9	-	-
			LLI wall (3E+3)	-	-	-	4E-5	4E-4
21	Scandium-48	Y, all compounds	8E+2	1E+3	6E-7	2E-9	1E-5	1E-4
21	Scandium-49 ²	Y, all compounds	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
22	Titanium-44	D, all compounds except those given for W and Y W, oxides, hydroxides, carbides, halides, and nitrates	3E+2	1E+1	5E-9	2E-11	4E-6	4E-5
		Y, SrTiO	-	3E+1	1E-8	4E-11	-	-
			-	6E+0	2E-9	8E-12	-	-
22	Titanium-45	D, see ⁴⁴ Ti	9E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see ⁴⁴ Ti	-	4E+4	1E-5	5E-8	-	-
		Y, see ⁴⁴ Ti	-	3E+4	1E-5	4E-8	-	-
23	Vanadium-47 ²	D, all compounds except those given for W	3E+4	8E+4	3E-5	1E-7	-	-
			St wall (3E+4)	-	-	-	4E-4	4E-3
		W, oxides, hydroxides, carbides, and halides	-	1E+5	4E-5	1E-7	-	-
23	Vanadium-48	D, see ⁴⁷ V	6E+2	1E+3	5E-7	2E-9	9E-6	9E-5
		W, see ⁴⁷ V	-	6E+2	3E-7	9E-10	-	-
23	Vanadium-49	D, see ⁴⁷ V	7E+4	3E+4	1E-5	-	-	-
			LLI wall (9E+4)	Bone surf (3E+4)	-	5E-8	1E-3	1E-2
		W, see ⁴⁷ V	-	2E+4	8E-6	2E-8	-	-
24	Chromium-48	D, all compounds except those given for W and Y W, halides and nitrates	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		Y, oxides and hydroxides	-	7E+3	3E-6	1E-8	-	-
			-	7E+3	3E-6	1E-8	-	-
24	Chromium-49 ²	D, see ⁴⁸ Cr	3E+4	8E+4	4E-5	1E-7	4E-4	4E-3
		W, see ⁴⁸ Cr	-	1E+5	4E-5	1E-7	-	-
		Y, see ⁴⁸ Cr	-	9E+4	4E-5	1E-7	-	-
24	Chromium-51	D, see ⁴⁸ Cr	4E+4	5E+4	2E-5	6E-8	5E-4	5E-3
		W, see ⁴⁸ Cr	-	2E+4	1E-5	3E-8	-	-
		Y, see ⁴⁸ Cr	-	2E+4	8E-6	3E-8	-	-
25	Manganese-51 ²	D, all compounds except those given for W W, oxides, hydroxides, halides, and nitrates	2E+4	5E+4	2E-5	7E-8	3E-4	3E-3
			-	6E+4	3E-5	8E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			25	Manganese-52m ²	D, see ⁵¹ Mn	3E+4 St wall (4E+4)	9E+4 -	4E-5 -
		W, see ⁵¹ Mn	-	1E+5	4E-5	1E-7	-	-
25	Manganese-52	D, see ⁵¹ Mn	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
		W, see ⁵¹ Mn	-	9E+2	4E-7	1E-9	-	-
25	Manganese-53	D, see ⁵¹ Mn	5E+4	1E+4	5E-6	-	7E-4	7E-3
				Bone surf (2E+4)	-	3E-8	-	-
		W, see ⁵¹ Mn	-	1E+4	5E-6	2E-8	-	-
25	Manganese-54	D, see ⁵¹ Mn	2E+3	9E+2	4E-7	1E-9	3E-5	3E-4
		W, see ⁵¹ Mn	-	8E+2	3E-7	1E-9	-	-
25	Manganese-56	D, see ⁵¹ Mn	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁵¹ Mn	-	2E+4	9E-6	3E-8	-	-
26	Iron-52	D, all compounds except those given for W	9E+2	3E+3	1E-6	4E-9	1E-5	1E-4
		W, oxides, hydroxides, and halides	-	2E+3	1E-6	3E-9	-	-
26	Iron-55	D, see ⁵² Fe	9E+3	2E+3	8E-7	3E-9	1E-4	1E-3
		W, see ⁵² Fe	-	4E+3	2E-6	6E-9	-	-
26	Iron-59	D, see ⁵² Fe	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		W, see ⁵² Fe	-	5E+2	2E-7	7E-10	-	-
26	Iron-60	D, see ⁵² Fe	3E+1	6E+0	3E-9	9E-12	4E-7	4E-6
		W, see ⁵² Fe	-	2E+1	8E-9	3E-11	-	-
27	Cobalt-55	W, all compounds except those given for Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
27	Cobalt-56	W, see ⁵⁵ Co	5E+2	3E+2	1E-7	4E-10	6E-6	6E-5
		Y, see ⁵⁵ Co	4E+2	2E+2	8E-8	3E-10	-	-
27	Cobalt-57	W, see ⁵⁵ Co	8E+3	3E+3	1E-6	4E-9	6E-5	6E-4
		Y, see ⁵⁵ Co	4E+3	7E+2	3E-7	9E-10	-	-
27	Cobalt-58m	W, see ⁵⁵ Co	6E+4	9E+4	4E-5	1E-7	8E-4	8E-3
		Y, see ⁵⁵ Co	-	6E+4	3E-5	9E-8	-	-
27	Cobalt-58	W, see ⁵⁵ Co	2E+3	1E+3	5E-7	2E-9	2E-5	2E-4
		Y, see ⁵⁵ Co	1E+3	7E+2	3E-7	1E-9	-	-
27	Cobalt-60m ²	W, see ⁵⁵ Co	1E+6 St wall (1E+6)	4E+6 -	2E-3 -	6E-6 -	- 2E-2	- 2E-1
		Y, see ⁵⁵ Co	-	3E+6	1E-3	4E-6	-	-
27	Cobalt-60	W, see ⁵⁵ Co	5E+2	2E+2	7E-8	2E-10	3E-6	3E-5
		Y, see ⁵⁵ Co	2E+2	3E+1	1E-8	5E-11	-	-
27	Cobalt-61 ²	W, see ⁵⁵ Co	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		Y, see ⁵⁵ Co	2E+4	6E+4	2E-5	8E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			27	Cobalt-62m ²	W, see ⁵⁵ Co St wall	4E+4 (5E+4)	2E+5 -	7E-5 -
28	Nickel-56	Y, see ⁵⁵ Co D, all compounds except those given for W W, oxides, hydroxides, and carbides Vapor	- 1E+3 -	2E+5 2E+3 1E+3	6E-5 8E-7 5E-7	2E-7 3E-9 2E-9	- 2E-5 -	- 2E-4 -
28	Nickel-57	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	2E+3 - -	5E+3 3E+3 6E+3	2E-6 1E-6 3E-6	7E-9 4E-9 9E-	2E-5 - -	2E-4 - -
28	Nickel-59	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	2E+4 - -	4E+3 7E+3 2E+3	2E-6 3E-6 8E-7	5E-9 1E-8 3E-9	3E-4 - -	3E-3 - -
28	Nickel-63	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	9E+3 - -	2E+3 3E+3 8E+2	7E-7 1E-6 3E-7	2E-9 4E-9 1E-9	1E-4 - -	1E-3 - -
28	Nickel-65	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	8E+3 - -	2E+4 3E+4 2E+4	1E-5 1E-5 7E-6	3E-8 4E-8 2E-8	1E-4 - -	1E-3 - -
28	Nickel-66	D, see ⁵⁶ Ni LLI wall W, see ⁵⁶ Ni Vapor	4E+2 (5E+2) -	2E+3 - 6E+2	7E-7 - 3E-7	2E-9 - 9E-10	- 6E-6 -	- 6E-5 -
29	Copper-60 ²	D, all compounds except those given for W and Y St wall W, sulfides, halides, and nitrates Y, oxides and hydroxides	3E+4 (3E+4) -	9E+4 - 1E+5	4E-5 - 5E-5	1E-7 - 2E-7	- 4E-4 -	- 4E-3 -
29	Copper-61	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 4E+4 4E+4	1E-5 2E-5 1E-5	4E-8 6E-8 5E-8	2E-4 - -	2E-3 - -
29	Copper-64	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 2E+4 2E+4	1E-5 1E-5 9E-6	4E-8 3E-8 3E-8	2E-4 - -	2E-3 - -
29	Copper-67	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	5E+3 - -	8E+3 5E+3 5E+3	3E-6 2E-6 2E-6	1E-8 7E-9 6E-9	6E-5 - -	6E-4 - -
30	Zinc-62	Y, all compounds	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
30	Zinc-63 ²	Y, all compounds St wall	2E+4 (3E+4)	7E+4 -	3E-5 -	9E-8 -	- 3E-4	- 3E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
30	Zinc-65	Y, all compounds	4E+2	3E+2	1E-7	4E-10	5E-6	5E-5
30	Zinc-69m	Y, all compounds	4E+3	7E+3	3E-6	1E-8	6E-5	6E-4
30	Zinc-69 ²	Y, all compounds	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
30	Zinc-71m	Y, all compounds	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
30	Zinc-72	Y, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
31	Gallium-65 ²	D, all compounds except those given for W	5E+4 St wall (6E+4),	2E+5	7E-5	2E-7	-	-
		W, oxides, hydroxides, carbides, halides, and nitrates	-	2E+5	8E-5	3E-7	-	-
31	Gallium-66	D, see ⁶⁵ Ga	1E+3	4E+3	1E-6	5E-9	1E-5	1E-4
		W, see ⁶⁵ Ga	-	3E+3	1E-6	4E-9	-	-
31	Gallium-67	D, see ⁶⁵ Ga	7E+3	1E+4	6E-6	2E-8	1E-4	1E-3
		W, see ⁶⁵ Ga	-	1E+4	4E-6	1E-8	-	-
31	Gallium-68 ²	D, see ⁶⁵ Ga	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ⁶⁵ Ga	-	5E+4	2E-5	7E-8	-	-
31	Gallium-70 ²	D, see ⁶⁵ Ga	5E+4 St wall (7E+4)	2E+5	7E-5	2E-7	-	-
		W, see ⁶⁵ Ga	-	2E+5	8E-5	3E-7	-	-
31	Gallium-72	D, see ⁶⁵ Ga	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ⁶⁵ Ga	-	3E+3	1E-6	4E-9	-	-
31	Gallium-73	D, see ⁶⁵ Ga	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁶⁵ Ga	-	2E+4	6E-6	2E-8	-	-
32	Germanium-66	D, all compounds except those given for W	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
		W, oxides, sulfides, and halides	-	2E+4	8E-6	3E-8	-	-
32	Germanium-67 ²	D, see ⁶⁶ Ge	3E+4 St wait (4E+4)	9E+4	4E-5	1E-7	-	-
		W, see ⁶⁶ Ge	-	1E+5	4E-5	1E-7	6E-4	6E-3
32	Germanium-68	D, see ⁶⁶ Ge	5E+3	4E+3	2E-6	5E-9	6E-5	6E-4
		W, see ⁶⁶ Ge	-	1E+2	4E-8	1E-10	-	-
32	Germanium-69	D, see ⁶⁶ Ge	1E+4	2E+4	6E-6	2E-8	2E-4	2E-3
		W, see ⁶⁶ Ge	-	8E+3	3E-6	1E-8	-	-
32	Germanium-71	D, see ⁶⁶ Ge	5E+5	4E+5	2E-4	6E-7	7E-3	7E-2
		W, see ⁶⁶ Ge	-	4E+4	2E-5	6E-8	-	-
32	Germanium-75 ²	D, see ⁶⁶ Ge	4E+4 St wall (7E+4)	8E+4	3E-5	1E-7	-	-
		W, see ⁶⁶ Ge	-	8E+4	4E-5	1E-7	9E-4	9E-3
32	Germanium-77	D, see ⁶⁶ Ge	9E+3	1E+4	4E-6	1E-8	1E-4	1E-3
		W, see ⁶⁶ Ge	-	6E+3	2E-6	8E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			32	Germanium-78 ²	D, see ⁶⁶ Ge	2E+4 St wall (2E+4)	2E+4 -	9E-6 -
		W, see ⁶⁶ Ge	-	2E+4	9E-6	3E-8	-	-
33	Arsenic-69 ²	W, all compounds	3E+4 St wall (4E+4)	1E+5 -	5E-5 -	2E-7 -	- 6E-4	- 6E-3
33	Arsenic-70 ²	W, all compounds	1E+4	5E+4	2E-5	7E-8	2E-4	2E-3
33	Arsenic-71	W, all compounds	4E+3	5E+3	2E-6	6E-9	5E-5	5E-4
33	Arsenic-72	W, all compounds	9E+2	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-73	W, all compounds	8E+3	2E+3	7E-7	2E-9	1E-4	1E-3
33	Arsenic-74	W, all compounds	1E+3	8E+2	3E-7	1E-9	2E-5	2E-4
33	Arsenic-76	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-77	W, all compounds	4E+3 LLI wall (5E+3)	5E+3 -	2E-6 -	7E-9 -	- 6E-5	- 6E-4
33	Arsenic-78 ²	W, all compounds	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
34	Selenium-70 ²	D, all compounds except those given for W W, oxides, hydroxides, carbides, and elemental Se	2E+4 1E+4	4E+4 4E+4	2E-5 2E-5	5E-8 6E-8	1E-4 -	1E-3 -
34	Selenium-73m ²	D, see ⁷⁰ Se	6E+4	2E+5	6E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	6E-5	2E-7	-	-
34	Selenium-73	D, see ⁷⁰ Se	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
		W, see ⁷⁰ Se	-	2E+4	7E-6	2E-8	-	-
34	Selenium-75	D, see ⁷⁰ Se	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
		W, see ⁷⁰ Se	-	6E+2	3E-7	8E-10	-	-
34	Selenium-79	D, see ⁷⁰ Se	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
		W, see ⁷⁰ Se	-	6E+2	2E-7	8E-10	-	-
34	Selenium-81m ²	D, see ⁷⁰ Se	4E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		W, see ⁷⁰ Se	2E+4	7E+4	3E-5	1E-7	-	-
34	Selenium-81 ²	D, see ⁷⁰ Se	6E+4 St wall (8E+4)	2E+5 -	9E-5 -	3E-7 -	- 1E-3	- 1E-2
		W, see ⁷⁰ Se	-	2E+5	1E-4	3E-7	-	-
34	Selenium-83 ²	D, see ⁷⁰ Se	4E+4	1E+5	5E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	5E-5	2E-7	-	-
35	Bromine-74m ²	D, bromides of H, Li, Na, K, Rb, Cs, and Fr	1E+4 St wall (2E+4)	4E+4 -	2E-5 -	5E-8 -	- 3E-4	- 3E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air	Col.2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
		W, Bromides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Mn, Tc, and Re	-	4E+4	2E-5	6E-8	-	-
35	Bromine-74 ²	D, see ^{74m} Br	2E+4	7E+4	3E-5	1E-7	-	-
		St wall	(4E+4)	-	-	-	5E-4	5E-3
		W, see ^{74m} Br	-	8E+4	4E-5	1E-7	-	-
35	Bromine-75 ²	D, see ^{74m} Br	3E+4	5E+4	2E-5	7E-8	-	-
		St wall	(4E+4)	-	-	-	5E-4	5E-3
		W, see ^{74m} Br	-	5E+4	2E-5	7E-8	-	-
35	Bromine-76	D, see ^{74m} Br	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
		W, see ^{74m} Br	-	4E+3	2E-6	6E-9	-	-
35	Bromine-77	D, see ^{74m} Br	2E+4	2E+4	1E-5	3E-8	2E-4	2E-3
		W, see ^{74m} Br	-	2E+4	8E-6	3E-8	-	-
35	Bromine-80m	D, see ^{74m} Br	2E+4	2E+4	7E-6	2E-8	3E-4	3E-3
		W, see ^{74m} Br	-	1E+4	6E-6	2E-8	-	-
35	Bromine-80 ²	D, see ^{74m} Br	5E+4	2E+5	8E-5	3E-7	-	-
		St wall	(9E+4)	-	-	-	1E-3	1E-2
		W, see ^{74m} Br	-	2E+5	9E-5	3E-7	-	-
35	Bromine-82	D, see ^{74m} Br	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see ^{74m} Br	-	4E+3	2E-6	5E-9	-	-
35	Bromine-83	D, see ^{74m} Br	5E+4	6E+4	3E-5	9E-8	-	-
		St wall	(7E+4)	-	-	-	9E-4	9E-3
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	-	-
35	Bromine-84 ²	D, see ^{74m} Br	2E+4	6E+4	2E-5	8E-8	-	-
		St wall	(3E+4)	-	-	-	4E-4	4E-3
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	-	-
36	Krypton-74 ²	Submersion ¹	-	-	3E-6	1E-8	-	-
36	Krypton-76	Submersion ¹	-	-	9E-6	4E-8	-	-
36	Krypton-77 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
36	Krypton-79	Submersion ¹	-	-	2E-5	7E-8	-	-
36	Krypton-81	Submersion ¹	-	-	7E-4	3E-6	-	-
36	Krypton-83m ²	Submersion ¹	-	-	1E-2	5E-5	-	-
36	Krypton-85m	Submersion ¹	-	-	2E-5	1E-7	-	-
36	Krypton-85	Submersion ¹	-	-	1E-4	7E-7	-	-
36	Krypton-87 ²	Submersion ¹	-	-	5E-6	2E-8	-	-
36	Krypton-88	Submersion ¹	-	-	2E-6	9E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
37	Rubidium-79 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	5E-5 -	2E-7 -	- 8E-4	- 8E-3
37	Rubidium-81m ²	D, all compounds	2E+5 St wall (3E+5)	3E+5 -	1E-4 -	5E-7 -	- 4E-3	- 4E-2
37	Rubidium-81	D, all compounds	4E+4	5E+4	2E-5	7E-8	5E-4	5E-3
37	Rubidium 82m	D, all compounds	1E+4	2E+4	7E-6	2E-8	2E-4	2E-3
37	Rubidium-83	D, all compounds	6E+2	1E+3	4E-7	1E-9	9E-6	9E-5
37	Rubidium-84	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-86	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-87	D, all compounds	1E+3	2E+3	6E-7	2E-9	1E-5	1E-4
37	Rubidium-88 ²	D, all compounds	2E+4 St wall (3E+4)	6E+4 -	3E-5 -	9E-8 -	- 4E-4	- 4E-3
37	Rubidium-89 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	6E-5 -	2E-7 -	- 9E-4	- 9E-3
38	Strontium-80 ²	D, all soluble compounds except SrTiO Y, all insoluble compounds and SrTiO	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
38	Strontium-81 ²	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	3E+4 2E+4	8E+4 8E+4	3E-5 3E-5	1E-7 1E-7	3E-4 -	3E-3 -
38	Strontium-82	D, see ⁸⁰ Sr LLI wall (2E+2) Y, see ⁸⁰ Sr	3E+2 2E+2	4E+2 9E+1	2E-7 4E-8	6E-10 1E-10	- -	- -
38	Strontium-83	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	3E+3 2E+3	7E+3 4E+3	3E-6 1E-6	1E-8 5E-9	3E-5 -	3E-4 -
38	Strontium-85m ²	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	2E+5 -	6E+5 8E+5	3E-4 4E-4	9E-7 1E-6	3E-3 -	3E-2 -
38	Strontium-85	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	3E+3 -	3E+3 2E+3	1E-6 6E-7	4E-9 2E-9	4E-5 -	4E-4 -
38	Strontium-87m	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	5E+4 4E+4	1E+5 2E+5	5E-5 6E-5	2E-7 2E-7	6E-4 -	6E-3 -
38	Strontium-89	D, see ⁸⁰ Sr LLI wall (6E+2) Y, see ⁸⁰ Sr	6E+2 5E+2	8E+2 1E+2	4E-7 6E-8	1E-9 2E-10	- -	- -
38	Strontium-90	D, see ⁸⁰ Sr Bone surf (4E+1) Y, see ⁸⁰ Sr	3E+1 -	2E+1 4E+0	8E-9 2E-9	- 6E-12	- -	- -
38	Strontium-91	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	2E+3 -	6E+3 4E+3	2E-6 1E-6	8E-9 5E-9	2E-5 -	2E-4 -

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
38	Strontium-92	D, see ^{80}Sr	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ^{80}Sr	-	7E+3	3E-6	9E-9	-	-
39	Yttrium-86m ²	W, all compounds except those given for Y	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		Y, oxides and hydroxides	-	5E+4	2E-5	8E-8	-	-
39	Yttrium-86	W, see ^{86m}Y	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
		Y, see ^{86m}Y	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-87	W, see ^{86m}Y	2E+3	3E+3	1E-6	5E-9	3E-5	3E-4
		Y, see ^{86m}Y	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-88	W, see ^{86m}Y	1E+3	3E+2	1E-7	3E-10	1E-5	1E-4
		Y, see ^{86m}Y	-	2E+2	1E-7	3E-10	-	-
39	Yttrium-90m	W, see ^{86m}Y	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
		Y, see ^{86m}Y	-	1E+4	5E-6	2E-8	-	-
39	Yttrium-90	W, see ^{86m}Y	4E+2	7E+2	3E-7	9E-10	-	-
		LLI wall (5E+2)	-	-	-	-	7E-6	7E-5
		Y, see ^{86m}Y	-	6E+2	3E-7	9E-10	-	-
39	Yttrium-91m ²	W, see ^{86m}Y	1E+5	2E+5	1E-4	3E-7	2E-3	2E-2
		Y, see ^{86m}Y	-	2E+5	7E-5	2E-7	-	-
39	Yttrium-91	W, see ^{86m}Y	5E+2	2E+2	7E-8	2E-10	-	-
		LLI wall (6E+2)	-	-	-	-	8E-6	8E-5
		Y, see ^{86m}Y	-	1E+2	5E-8	2E-10	-	-
39	Yttrium-92	W, see ^{86m}Y	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ^{86m}Y	-	8E+3	3E-6	1E-8	-	-
39	Yttrium-93	W, see ^{86m}Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see ^{86m}Y	-	2E+3	1E-6	3E-9	-	-
39	Yttrium-94 ²	W, see ^{86m}Y	2E+4	8E+4	3E-5	1E-7	-	-
		St wall (3E+4)	-	-	-	-	4E-4	4E-3
		Y, see ^{86m}Y	-	8E+4	3E-5	1E-7	-	-
39	Yttrium-95 ²	W, see ^{86m}Y	4E+4	2E+5	6E-5	2E-7	-	-
		St wall (5E+4)	-	-	-	-	7E-4	7E-3
		Y, see ^{86m}Y	-	1E+5	6E-5	2E-7	-	-
40	Zirconium-86	D, all compounds except those given for W and Y	1E+3	4E+3	2E-6	6E-9	2E-5	2E-4
		W, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
		Y, carbide	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-88	D, see ^{86}Zr	4E+3	2E+2	9E-8	3E-10	5E-5	5E-4
		W, see ^{86}Zr	-	5E+2	2E-7	7E-10	-	-
		Y, see ^{86}Zr	-	3E+2	1E-7	4E-10	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
40	Zirconium-89	D, see ^{86}Zr	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ^{86}Zr	-	2E+3	1E-6	3E-9	-	-
		Y, see ^{86}Zr	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-93	D, see ^{86}Zr	1E+3	6E+0	3E-9	-	-	-
		Bone surf (3E+3)	Bone surf (2E+1)	-	2E-11	4E-5	4E-4	
		W, see ^{86}Zr	-	2E+1	1E-8	-	-	-
		Bone surf (6E+1)	-	9E-11	-	-		
		Y, see ^{86}Zr	-	6E+1	2E-8	-	-	-
40	Zirconium-95	D, see ^{86}Zr	1E+3	1E+2	5E-8	-	2E-5	2E-4
		Bone surf (3E+2)	-	4E+2	2E-7	5E-10	-	-
		W, see ^{86}Zr	-	4E+2	2E-7	5E-10	-	-
		Y, see ^{86}Zr	-	3E+2	1E-7	4E-10	-	-
		Bone surf (7E+1)	-	9E-11	-	-		
40	Zirconium-97	D, see ^{86}Zr	6E+2	2E+3	8E-7	3E-9	9E-6	9E-5
		W, see ^{86}Zr	-	1E+3	6E-7	2E-9	-	-
		Y, see ^{86}Zr	-	1E+3	5E-7	2E-9	-	-
41	Niobium-88 ²	W, all compounds except those given for Y	5E+4	2E+5	9E-5	3E-7	-	-
		St wall (7E+4)	-	-	-	-	1E-3	1E-2
		Y, oxides and hydroxides	-	2E+5	9E-5	3E-7	-	-
41	Niobium-89 ² (66 min)	W, see ^{88}Nb	1E+4	4E+4	2E-5	6E-8	1E-4	1E-3
		Y, see ^{88}Nb	-	4E+4	2E-5	5E-8	-	-
41	Niobium-89 (122 min)	W, see ^{88}Nb	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ^{88}Nb	-	2E+4	6E-6	2E-8	-	-
41	Niobium-90	W, see ^{88}Nb	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		Y, see ^{88}Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-93m	W, see ^{88}Nb	9E+3	2E+3	8E-7	3E-9	-	-
		LLI wall (1E+4)	-	-	-	-	2E-4	2E-3
		Y, see ^{88}Nb	-	2E+2	7E-8	2E-10	-	-
41	Niobium-94	W, see ^{88}Nb	9E+2	2E+2	8E-8	3E-10	1E-5	1E-4
		Y, see ^{88}Nb	-	2E+1	6E-9	2E-11	-	-
41	Niobium-95m	W, see ^{88}Nb	2E+3	3E+3	1E-6	4E-9	-	-
		LLI wall (2E+3)	-	-	-	-	3E-5	3E-4
		Y, see ^{88}Nb	-	2E+3	9E-7	3E-9-	-	-
41	Niobium-95	W, see ^{88}Nb	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		Y, see ^{88}Nb	-	1E+3	5E-7	2E-9-	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
41	Niobium-96	W, see ⁸⁸ Nb	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see ⁸⁸ Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-97 ²	W, see ⁸⁸ Nb	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see ⁸⁸ Nb	-	7E+4	3E-5	1E-7	-	-
41	Niobium-98 ²	W, see ⁸⁸ Nb	1E+4	5E+4	2E-5	8E-8	2E-4	2E-3
		Y, see ⁸⁸ Nb	-	5E+4	2E-5	7E-8	-	-
42	Molybdenum-90	D, all compounds except those given for Y	4E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, oxides, hydroxides, and MoS	2E+3	5E+3	2E-6	6E-9	-	-
42	Molybdenum-93m	D, see ⁹⁰ Mo	9E+3	2E+4	7E-6	2E-8	6E-5	6E-4
		Y, see ⁹⁰ Mo	4E+3	1E+4	6E-6	2E-8	-	-
42	Molybdenum-93	D, see ⁹⁰ Mo	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		Y, see ⁹⁰ Mo	2E+4	2E+2	8E-8	2E-10	-	-
42	Molybdenum-99	D, see ⁹⁰ Mo	2E+3	3E+3	1E-6	4E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ⁹⁰ Mo	1E+3	1E+3	6E-7	2E-9	-	-
42	Molybdenum-101 ²	D, see ⁹⁰ Mo	4E+4	1E+5	6E-5	2E-7	-	-
		St wall (5E+4)	-	-	-	-	7E-4	7E-3
		Y, see ⁹⁰ Mo	-	1E+5	6E-5	2E-7	-	-
43	Technetium-93m ²	D, All compounds except those given for W	7E+4	2E+5	6E-5	2E-7	1E-3	1E-2
		W, oxides, hydroxides, halides, and nitrates	-	3E+5	1E-4	4E-7	-	-
43	Technetium-93	D, see ^{93m} Tc	3E+4	7E+4	3E-5	1E-7	4E-4	4E-3
		W, see ^{93m} Tc	-	1E+5	4E-5	1E-7	-	-
43	Technetium-94m ²	D, see ^{93m} Tc	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, see ^{93m} Tc	-	6E+4	2E-5	8E-8	-	-
43	Technetium-94	D, see ^{93m} Tc	9E+3	2E+4	8E-6	3E-8	1E-4	1E-3
		W, see ^{93m} Tc	-	2E+4	1E-5	3E-8	-	-
43	Technetium-95m	D, see ^{93m} Tc	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		W, see ^{93m} Tc	-	2E+3	8E-7	3E-9	-	-
43	Technetium-95	D, see ^{93m} Tc	1E+4	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ^{93m} Tc	-	2E+4	8E-6	3E-8	-	-
43	Technetium-96m ²	D, see ^{93m} Tc	2E+5	3E+5	1E-4	4E-7	2E-3	2E-2
		W, see ^{93m} Tc	-	2E+5	1E-4	3E-7	-	-
43	Technetium-96	D, see ^{93m} Tc	2E+3	3E+3	1E-6	5E-9	3E-5	3E-4
		W, see ^{93m} Tc	-	2E+3	9E-7	3E-9	-	-
43	Technetium-97m	D, see ^{93m} Tc	5E+3	7E+3	3E-6	-	6E-5	6E-4
		St wall (7E+3)	-	-	-	1E-8	-	-
		W, see ^{93m} Tc	-	1E+3	5E-7	2E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
43	Technetium-97	D, see ^{93m}Tc	4E+4	5E+4	2E-5	7E-8	5E-4	5E-3
		W, see ^{93m}Tc	-	6E+3	2E-6	8E-9	-	-
43	Technetium-98	D, see ^{93m}Tc	1E+3	2E+3	7E-7	2E-9	1E-5	1E-4
		W, see ^{93m}Tc	-	3E+2	1E-7	4E-10	-	-
43	Technetium-99m	D, see ^{93m}Tc	8E+4	2E+5	6E-5	2E-7	1E-3	1E-2
		W, see ^{93m}Tc	-	2E+5	1E-4	3E-7	-	-
43	Technetium-99	D, see ^{93m}Tc	4E+3	5E+3	2E-6	-	6E-5	6E-4
				St wall				
			-	(6E+3)	-	8E-9	-	-
		W, see ^{93m}Tc	-	7E+2	3E-7	9E-10	-	-
43	Technetium-101 ²	D, see ^{93m}Tc	9E+4	3E+5	1E-4	5E-7	-	-
			St wall					
			(1E+5)	-	-	-	2E-3	2E-2
		W, see ^{93m}Tc	-	4E+5	2E-4	5E-7	-	-
43	Technetium-104 ²	D, see ^{93m}Tc	2E+4	7E+4	3E-5	1E-7	-	-
			St wall					
			(3E+4)	-	-	-	4E-4	4E-3
		W, see ^{93m}Tc	-	9E+4	4E-5	1E-7	-	-
44	Ruthenium-94 ²	D, all compounds except those given for W and Y	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, halides	-	6E+4	3E-5	9E-8	-	-
		Y, oxides and hydroxides	-	6E+4	2E-5	8E-8	-	-
44	Ruthenium-97	D, see ^{94}Ru	8E+3	2E+4	8E-6	3E-8	1E-4	1E-3
		W, see ^{94}Ru	-	1E+4	5E-6	2E-8	-	-
		Y, see ^{94}Ru	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-103	D, see ^{94}Ru	2E+3	2E+3	7E-7	2E-9	3E-5	3E-4
		W, see ^{94}Ru	-	1E+3	4E-7	1E-9	-	-
		Y, see ^{94}Ru	-	6E+2	3E-7	9E-10	-	-
44	Ruthenium-105	D, see ^{94}Ru	5E+3	1E+4	6E-6	2E-8	7E-5	7E-4
		W, see ^{94}Ru	-	1E+4	6E-6	2E-8	-	-
		Y, see ^{94}Ru	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-106	D, see ^{94}Ru	2E+2	9E+1	4E-8	1E-10	-	-
			LLI wall					
			(2E+2)	-	-	-	3E-6	3E-5
		W, see ^{94}Ru	-	5E+1	2E-8	8E-11	-	-
		Y, see ^{94}Ru	-	1E+1	5E-9	2E-11	-	-
45	Rhodium-99m	D, all compounds except those given for W and Y	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		W, halides	-	8E+4	3E-5	1E-7	-	-
		Y, oxides and hydroxides	-	7E+4	3E-5	9E-8	-	-
45	Rhodium-99	D, see ^{99m}Rh	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ^{99m}Rh	-	2E+3	9E-7	3E-9	-	-
		Y, see ^{99m}Rh	-	2E+3	8E-7	3E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			45	Rhodium-100	D, see $^{99\text{m}}\text{Rh}$	2E+3	5E+3	2E-6
		W, see $^{99\text{m}}\text{Rh}$	-	4E+3	2E-6	6E-9	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	4E+3	2E-6	5E-9	-	-
45	Rhodium-101m	D, see $^{99\text{m}}\text{Rh}$	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see $^{99\text{m}}\text{Rh}$	-	8E+3	4E-6	1E-8	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	8E+3	3E-6	1E-8	-	-
45	Rhodium-101	D, see $^{99\text{m}}\text{Rh}$	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see $^{99\text{m}}\text{Rh}$	-	8E+2	3E-7	1E-9	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	2E+2	6E-8	2E-10	-	-
45	Rhodium-102m	D, see $^{99\text{m}}\text{Rh}$	1E+3	5E+2	2E-7	7E-10	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		W, see $^{99\text{m}}\text{Rh}$	-	4E+2	2E-7	5E-10	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	1E+2	5E-8	2E-10	-	-
45	Rhodium-102	D, see $^{99\text{m}}\text{Rh}$	6E+2	9E+1	4E-8	1E-10	8E-6	8E-5
		W, see $^{99\text{m}}\text{Rh}$	-	2E+2	7E-8	2E-10	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	6E+1	2E-8	8E-11	-	-
45	Rhodium-103m ²	D, see $^{99\text{m}}\text{Rh}$	4E+5	1E+6	5E-4	2E-6	6E-3	6E-2
		W, see $^{99\text{m}}\text{Rh}$	-	1E+6	5E-4	2E-6	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	1E+6	5E-4	2E-6	-	-
45	Rhodium-105	D, see $^{99\text{m}}\text{Rh}$	4E+3	1E+4	5E-6	2E-8	-	-
		LLI wall (4E+3)	-	-	-	-	5E-5	5E-4
		W, see $^{99\text{m}}\text{Rh}$	-	6E+3	3E-6	9E-9	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	6E+3	2E-6	8E-9	-	-
45	Rhodium-106m	D, see $^{99\text{m}}\text{Rh}$	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, see $^{99\text{m}}\text{Rh}$	-	4E+4	2E-5	5E-8	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	4E+4	1E-5	5E-8	-	-
45	Rhodium-107 ²	D, see $^{99\text{m}}\text{Rh}$	7E+4	2E+5	1E-4	3E-7	-	-
		St wall (9E+4)	-	-	-	-	1E-3	1E-2
		W, see $^{99\text{m}}\text{Rh}$	-	3E+5	1E-4	4E-7	-	-
		Y, see $^{99\text{m}}\text{Rh}$	-	3E+5	1E-4	3E-7	-	-
46	Palladium-100	D, all compounds except those given for W and Y	1E+3	1E+3	6E-7	2E-9	2E-5	2E-4
		W, nitrates	-	1E+3	5E-7	2E-9	-	-
		Y, oxides and hydroxides	-	1E+3	6E-7	2E-9	-	-
46	Palladium-101	D, see ^{100}Pd	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ^{100}Pd	-	3E+4	1E-5	5E-8	-	-
		Y, see ^{100}Pd	-	3E+4	1E-5	4E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
46	Palladium-103	D, see ^{100}Pd	6E+3	6E+3	3E-6	9E-9	-	-
		LLI wall	(7E+3)	-	-	-	1E-4	1E-3
		W, see ^{100}Pd	-	4E+3	2E-6	6E-9	-	-
		Y, see ^{100}Pd	-	4E+3	1E-6	5E-9	-	-
46	Palladium-107	D, see ^{100}Pd	3E+4	2E+4	9E-6	-	-	-
		LLI wall	(4E+4)	Kidneys (2E+4)	-	3E-8	5E-4	5E-3
		W, see ^{100}Pd	-	7E+3	3E-6	1E-8	-	-
		Y, see ^{100}Pd	-	4E+2	2E-7	6E-10	-	-
46	Palladium-109	D, see ^{100}Pd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		W, see ^{100}Pd	-	5E+3	2E-6	8E-9	-	-
		Y, see ^{100}Pd	-	5E+3	2E-6	6E-9	-	-
47	Silver-102 ²	D, all compounds except those given for W and Y	5E+4	2E+5	8E-5	2E-7	-	-
		St wall	(6E+4)	-	-	-	9E-4	9E-3
		W, nitrates and sulfides	-	2E+5	9E-5	3E-7	-	-
		Y, oxides and hydroxides	-	2E+5	8E-5	3E-7	-	-
47	Silver-103 ²	D, see ^{102}Ag	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see ^{102}Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ^{102}Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104m ²	D, see ^{102}Ag	3E+4	9E+4	4E-5	1E-7	4E-4	4E-3
		W, see ^{102}Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ^{102}Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104 ²	D, see ^{102}Ag	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
		W, see ^{102}Ag	-	1E+5	6E-5	2E-7	-	-
		Y, see ^{102}Ag	-	1E+5	6E-5	2E-7	-	-
47	Silver-105	D, see ^{102}Ag	3E+3	1E+3	4E-7	1E-9	4E-5	4E-4
		W, see ^{102}Ag	-	2E+3	7E-7	2E-9	-	-
		Y, see ^{102}Ag	-	2E+3	7E-7	2E-9	-	-
47	Silver-106m	D, see ^{102}Ag	8E+2	7E+2	3E-7	1E-9	1E-5	1E-4
		W, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
		Y, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
47	Silver-106 ²	D, see ^{102}Ag	6E+4	2E+5	8E-5	3E-7	-	-
		St Wall	(6E+4)	-	-	-	9E-4	9E-3
		W, see ^{102}Ag	-	2E+5	9E-5	3E-7	-	-
		Y, see ^{102}Ag	-	2E+5	8E-5	3E-7	-	-
47	Silver-108m	D, see ^{102}Ag	6E+2	2E+2	8E-8	3E-10	9E-6	9E-5
		W, see ^{102}Ag	-	3E+2	1E-7	4E-10	-	-
		Y, see ^{102}Ag	-	2E+1	1E-8	3E-11	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air	Col.2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
47	Silver-110m	D, see ^{102}Ag	5E+2	1E+2	5E-8	2E-10	6E-6	6E-5
		W, see ^{102}Ag	-	2E+2	8E-8	3E-10	-	-
		Y, see ^{102}Ag	-	9E+1	4E-8	1E-10	-	-
47	Silver-111	D, see ^{102}Ag	9E+2	2E+3	6E-7	-	-	-
		LLI wall	(1E+3)	Liver (2E+3)	-	2E-9	2E-5	2E-4
		W, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
		Y, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
47	Silver-112	D, see ^{102}Ag	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ^{102}Ag	-	1E+4	4E-6	1E-8	-	-
		Y, see ^{102}Ag	-	9E+3	4E-6	1E-8	-	-
47	Silver-115 ²	D, see ^{102}Ag	3E+4	9E+4	4E-5	1E-7	-	-
		St wall	(3E+4)	-	-	-	4E-4	4E-3
		W, see ^{102}Ag	-	9E+4	4E-5	1E-7	-	-
		Y, see ^{102}Ag	-	8E+4	3E-5	1E-7	-	-
48	Cadmium-104 ²	D, all compounds except those given for W and Y	2E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		W, sulfides, halides, and nitrates	-	1E+5	5E-5	2E-7	-	-
		Y, oxides and hydroxides	-	1E+5	5E-5	2E-7	-	-
48	Cadmium-107	D, see ^{104}Cd	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
		W, see ^{104}Cd	-	6E+4	2E-5	8E-8	-	-
		Y, see ^{104}Cd	-	5E+4	2E-5	7E-8	-	-
48	Cadmium-109	D, see ^{104}Cd	3E+2	4E+1	1E-8	-	-	-
		Kidneys	(4E+2)	Kidneys (5E+1)	-	7E-11	6E-6	6E-5
		W, see ^{104}Cd	-	1E+2	5E-8	-	-	-
		Kidneys	-	(1E+2)	-	2E-10	-	-
		Y, see ^{104}Cd	-	1E+2	5E-8	2E-10	-	-
48	Cadmium-113m	D, see ^{104}Cd	2E+1	2E+0	1E-9	-	-	-
		Kidneys	(4E+1)	Kidneys (4E+0)	-	5E-12	5E-7	5E-6
		W, see ^{104}Cd	-	8E+0	4E-9	-	-	-
		Kidneys	-	(1E+1)	-	2E-11	-	-
		Y, see ^{104}Cd	-	1E+1	5E-9	2E-11	-	-
48	Cadmium-113	D, see ^{104}Cd	2E+1	2E+0	9E-10	-	-	-
		Kidneys	(3E+1)	Kidneys (3E+0)	-	5E-12	4E-7	4E-6
		W, see ^{104}Cd	-	8E+0	3E-9	-	-	-
		Kidneys	-	(1E+1)	-	2E-11	-	-
		Y, see ^{104}Cd	-	1E+1	6E-9	2E-11	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			48	Cadmium-115m	D, see ^{104}Cd	3E+2	5E+1 Kidneys	2E-8
			-	(8E+1)	-	1E-10	-	-
		W, see ^{104}Cd	-	1E+2	5E-8	2E-10	-	-
		Y, see ^{104}Cd	-	1E+2	6E-8	2E-10	-	-
48	Cadmium-115	D, see ^{104}Cd	9E+2	1E+3	6E-7	2E-9	-	-
			LLI wall (1E+3)	-	-	-	1E-5	1E-4
		W, see ^{104}Cd	-	1E+3	5E-7	2E-9	-	-
		Y, see ^{104}Cd	-	1E+3	6E-7	2E-9	-	-
48	Cadmium-117m	D, see ^{104}Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ^{104}Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ^{104}Cd	-	1E+4	6E-6	2E-8	-	-
48	Cadmium-117	D, see ^{104}Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ^{104}Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ^{104}Cd	-	1E+4	6E-6	2E-8	-	-
49	Indium-109	D, all compounds except those given for W	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	9E-8	-	-
49	Indium-110 ² (69.1 min)	D, see ^{109}In	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ^{109}In	-	6E+4	2E-5	8E-8	-	-
49	Indium-110 (4.9 h)	D, see ^{109}In	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		W, see ^{109}In	-	2E+4	8E-6	3E-8	-	-
49	Indium-111	D, see ^{109}In	4E+3	6E+3	3E-6	9E-9	6E-5	6E-4
		W, see ^{109}In	-	6E+3	3E-6	9E-9	-	-
49	Indium-112 ²	D, see ^{109}In	2E+5	6E+5	3E-4	9E-7	2E-3	2E-2
		W, see ^{109}In	-	7E+5	3E-4	1E-6	-	-
49	Indium-113m ²	D, see ^{109}In	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		W, see ^{109}In	-	2E+5	8E-5	3E-7	-	-
49	Indium-114m	D, see ^{109}In	3E+2	6E+1	3E-8	9E-11	-	-
			LLI wall (4E+2)	-	-	-	5E-6	5E-5
		W, see ^{109}In	-	1E+2	4E-8	1E-10	-	-
49	Indium-115m	D, see ^{109}In	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ^{109}In	-	5E+4	2E-5	7E-8	-	-
49	Indium-115	D, see ^{109}In	4E+1	1E+0	6E-10	2E-12	5E-7	5E-6
		W, see ^{109}In	-	5E+0	2E-9	8E-12	-	-
49	Indium-116m ²	D, see ^{109}In	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		W, see ^{109}In	-	1E+5	5E-5	2E-7	-	-
49	Indium-117m ²	D, see ^{109}In	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ^{109}In	-	4E+4	2E-5	6E-8	-	-
49	Indium-117 ²	D, see ^{109}In	6E+4	2E+5	7E-5	2E-7	8E-4	8E-3
		W, see ^{109}In	-	2E+5	9E-5	3E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
49	Indium-119m ²	D, see ¹⁰⁹ In	4E+4 St wall (5E+4)	1E+5	5E-5	2E-7	-	-
		W, see ¹⁰⁹ In	-	1E+5	6E-5	2E-7	-	-
50	Tin-110	D, all compounds except those given for W W, sulfides, oxides, hydroxides, halides, nitrates, and stannic phosphate	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
50	Tin-111 ²	D, see ¹¹⁰ Sn	7E+4	2E+5	9E-5	3E-7	1E-3	1E-2
		W, see ¹¹⁰ Sn	-	3E+5	1E-4	4E-7	-	-
50	Tin-113	D, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3)	1E+3	5E-7	2E-9	-	-
		W, see ¹¹⁰ Sn	-	5E+2	2E-7	8E-10	-	-
50	Tin-117m	D, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3)	1E+3 Bone surf (2E+3)	5E-7	-	-	-
		W, see ¹¹⁰ Sn	-	1E+3	6E-7	2E-9	-	-
50	Tin-119m	D, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3)	2E+3	1E-6	3E-9	-	-
		W, see ¹¹⁰ Sn	-	1E+3	4E-7	1E-9	6E-5	6E-4
50	Tin-121m	D, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3)	9E+2	4E-7	1E-9	-	-
		W, see ¹¹⁰ Sn	-	5E+2	2E-7	8E-10	-	-
50	Tin-121	D, see ¹¹⁰ Sn	6E+3 LLI wall (6E+3)	2E+4	6E-6	2E-8	-	-
		W, see ¹¹⁰ Sn	-	1E+4	5E-6	2E-8	8E-5	8E-4
50	Tin-123m ²	D, see ¹¹⁰ Sn	5E+4	1E+5	5E-5	2E-7	-	-
		W, see ¹¹⁰ Sn	-	1E+5	6E-5	2E-7	7E-4	7E-3
50	Tin-123	D, see ¹¹⁰ Sn	5E+2 LLI wall (6E+2)	6E+2	3E-7	9E-10	-	-
		W, see ¹¹⁰ Sn	-	2E+2	7E-8	2E-10	9E-6	9E-5
50	Tin-125	D, see ¹¹⁰ Sn	4E+2 LLI wall (5E+2)	9E+2	4E-7	1E-9	-	-
		W, see ¹¹⁰ Sn	-	4E+2	1E-7	5E-10	6E-6	6E-5
50	Tin-126	D, see ¹¹⁰ Sn	3E+2	6E+1	2E-8	8E-11	-	-
		W, see ¹¹⁰ Sn	-	7E+1	3E-8	9E-11	4E-6	4E-5
50	Tin-127	D, see ¹¹⁰ Sn	7E+3	2E+4	8E-6	3E-8	-	-
		W, see ¹¹⁰ Sn	-	2E+4	8E-6	3E-8	9E-5	9E-4

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			50	Tin-128 ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	9E+3 -	3E+4 4E+4	1E-5 1E-5
51	Antimony-115 ²	D, all compounds except those given for W W, oxides, hydroxides, halides, sulfides, sulfates, and nitrates	8E+4 -	2E+5 3E+5	1E-4 1E-4	3E-7 4E-7	1E-3 -	1E-2 -
51	Antimony-116m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 -	7E+4 1E+5	3E-5 6E-5	1E-7 2E-7	3E-4 -	3E-3 -
51	Antimony-116 ²	D, see ¹¹⁵ Sb St wall (9E+4) W, see ¹¹⁵ Sb	7E+4 - -	3E+5 -	1E-4 -	4E-7 -	- 1E-3 -	- 1E-2 -
51	Antimony-117	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	7E+4 -	2E+5 3E+5	9E-5 1E-4	3E-7 4E-7	9E-4 -	9E-3 -
51	Antimony-118m	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+3 5E+3	2E+4 2E+4	8E-6 9E-6	3E-8 3E-8	7E-5 -	7E-4 -
51	Antimony-119	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 2E+4	5E+4 3E+4	2E-5 1E-5	6E-8 4E-8	2E-4 -	2E-3 -
51	Antimony-120 ² (16 min)	D, see ¹¹⁵ Sb St wall (2E+5) W, see ¹¹⁵ Sb	1E+5 - -	4E+5 -	2E-4 -	6E-7 -	- 2E-3 -	- 2E-2 -
51	Antimony-120 (5.76 d)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+3 9E+2	2E+3 1E+3	9E-7 5E-7	3E-9 2E-9	1E-5 -	1E-4 -
51	Antimony-122	D, see ¹¹⁵ Sb LLI wall (8E+2) W, see ¹¹⁵ Sb	8E+2 - 7E+2	2E+3 -	1E-6 -	3E-9 -	- 1E-5 -	- 1E-4 -
51	Antimony-124m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	3E+5 2E+5	8E+5 6E+5	4E-4 2E-4	1E-6 8E-7	3E-3 -	3E-2 -
51	Antimony-124	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	9E+2 2E+2	4E-7 1E-7	1E-9 3E-10	7E-6 -	7E-5 -
51	Antimony-125	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+3 -	2E+3 5E+2	1E-6 2E-7	3E-9 7E-10	3E-5 -	3E-4 -
51	Antimony-126m ²	D, see ¹¹⁵ Sb St wall (7E+4) W, see ¹¹⁵ Sb	5E+4 - -	2E+5 -	8E-5 -	3E-7 -	- 9E-4 -	- 9E-3 -
51	Antimony-126	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	1E+3 5E+2	5E-7 2E-7	2E-9 7E-10	7E-6 -	7E-5 -
51	Antimony-127	D, see ¹¹⁵ Sb LLI wall (8E+2) W, see ¹¹⁵ Sb	8E+2 - 7E+2	2E+3 -	9E-7 -	3E-9 -	- 1E-5 -	- 1E-4 -

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
51	Antimony-128 ² (10.4 min)	D, see ¹¹⁵ Sb	8E+4 St wall (1E+5)	4E+5 -	2E-4 -	5E-7 -	- 1E-3	- 1E-2
		W, see ¹¹⁵ Sb	-	4E+5	2E-4	6E-7	-	-
51	Antimony-128 (9.01 h)	D, see ¹¹⁵ Sb	1E+3	4E+3	2E-6	6E-9	2E-5	2E-4
		W, see ¹¹⁵ Sb	-	3E+3	1E-6	5E-9	-	-
51	Antimony-129	D, see ¹¹⁵ Sb	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, see ¹¹⁵ Sb	-	9E+3	4E-6	1E-8	-	-
51	Antimony-130 ²	D, see ¹¹⁵ Sb	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		W, see ¹¹⁵ Sb	-	8E+4	3E-5	1E-7	-	-
51	Antimony-131 ²	D, see ¹¹⁵ Sb	1E+4 Thyroid (2E+4)	2E+4 Thyroid (4E+4)	1E-5 -	- 6E-8	- 2E-4	- 2E-3
		W, see ¹¹⁵ Sb	- -	2E+4 Thyroid (4E+4)	1E-5 -	- 6E-8	- -	- -
52	Tellurium-116	D, all compounds except those given for W W, oxides, hydroxides, and nitrates	8E+3 -	2E+4 3E+4	9E-6 1E-5	3E-8 4E-8	1E-4 -	1E-3 -
52	Tellurium-121m	D, see ¹¹⁶ Te	5E+2 Bone surf (7E+2)	2E+2 Bone surf (4E+2)	8E-8 -	- 5E-10	- 1E-5	- 1E-4
		W, see ¹¹⁶ Te	-	4E+2	2E-7	6E-10	-	-
52	Tellurium-121	D, see ¹¹⁶ Te	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see ¹¹⁶ Te	-	3E+3	1E-6	4E-9	-	-
52	Tellurium-123m	D, see ¹¹⁶ Te	6E+2 Bone surf (1E+3)	2E+2 Bone surf (5E+2)	9E-8 -	- 8E-10	- 1E-5	- 1E-4
		W, see ¹¹⁶ Te	-	5E+2	2E-7	8E-10	-	-
52	Tellurium-123	D, see ¹¹⁶ Te	5E+2 Bone surf (1E+3)	2E+2 Bone surf (5E+2)	8E-8 -	- 7E-10	- 2E-5	- 2E-4
		W, see ¹¹⁶ Te	-	4E+2 Bone surf (1E+3)	2E-7 -	- 2E-9	- -	- -
52	Tellurium-125m	D, see ¹¹⁶ Te	1E+3 Bone surf (1E+3)	4E+2 Bone surf (1E+3)	2E-7 -	- 1E-9	- 2E-5	- 2E-4
		W, see ¹¹⁶ Te	-	7E+2	3E-7	1E-9	-	-
52	Tellurium-127m	D, see ¹¹⁶ Te	6E+2 -	3E+2 Bone surf (4E+2)	1E-7 -	- 6E-10	9E-6 -	9E-5 -
		W, see ¹¹⁶ Te	-	3E+2	1E-7	4E-10	-	-
52	Tellurium-127	D, see ¹¹⁶ Te	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ¹¹⁶ Te	-	2E+4	7E-6	2E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
52	Tellurium-129m	D, see ^{116}Te	5E+2	6E+2	3E-7	9E-10	7E-6	7E-5
		W, see ^{116}Te	-	2E+2	1E-7	3E-10	-	-
52	Tellurium-129 ²	D, see ^{116}Te	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see ^{116}Te	-	7E+4	3E-5	1E-7	-	-
52	Tellurium-131m	D, see ^{116}Te	3E+2	4E+2	2E-7	-	-	-
		Thyroid	(6E+2)	Thyroid (1E+3)	-	2E-9	8E-6	8E-5
		W, see ^{116}Te	-	4E+2	2E-7	-	-	-
		Thyroid	-	Thyroid (9E+2)	-	1E-9	-	-
52	Tellurium-131 ²	D, see ^{116}Te	3E+3	5E+3	2E-6	-	-	-
		Thyroid	(6E+3)	Thyroid (1E+4)	-	2E-8	8E-5	8E-4
		W, see ^{116}Te	-	5E+3	2E-6	-	-	-
		Thyroid	-	Thyroid (1E+4)	-	2E-8	-	-
52	Tellurium-132	D, see ^{116}Te	2E+2	2E+2	9E-8	-	-	-
		Thyroid	(7E+2)	Thyroid (8E+2)	-	1E-9	9E-6	9E-5
		W, see ^{116}Te	-	2E+2	9E-8	-	-	-
		Thyroid	-	Thyroid (6E+2)	-	9E-10	-	-
52	Tellurium-133m ²	D, see ^{116}Te	3E+3	5E+3	2E-6	-	-	-
		Thyroid	(6E+3)	Thyroid (1E+4)	-	2E-8	9E-5	9E-4
		W, see ^{116}Te	-	5E+3	2E-6	-	-	-
		Thyroid	-	Thyroid (1E+4)	-	2E-8	-	-
52	Tellurium-133 ²	D, see ^{116}Te	1E+4	2E+4	9E-6	-	-	-
		Thyroid	(3E+4)	Thyroid (6E+4)	-	8E-8	4E-4	4E-3
		W, see ^{116}Te	-	2E+4	9E-6	-	-	-
		Thyroid	-	Thyroid (6E+4)	-	8E-8	-	-
52	Tellurium-134 ²	D, see ^{116}Te	2E+4	2E+4	1E-5	-	-	-
		Thyroid	(2E+4)	Thyroid (5E+4)	-	7E-8	3E-4	3E-3
		W, see ^{116}Te	-	2E+4	1E-5	-	-	-
		Thyroid	-	Thyroid (5E+4)	-	7E-8	-	-
53	Iodine-120m ²	D, all compounds	1E+4	2E+4	9E-6	3E-8	-	-
		Thyroid	(1E+4)	-	-	-	2E-4	2E-3
53	Iodine-120 ²	D, all compounds	4E+3	9E+3	4E-6	-	-	-
		Thyroid	(8E+3)	Thyroid (1E+4)	-	2E-8	1E-4	1E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
53	Iodine-121	D, all compounds	1E+4 Thyroid (3E+4)	2E+4 Thyroid (5E+4)	8E-6 -	- 7E-8	- 4E-4	- 4E-3
53	Iodine-123	D, all compounds	3E+3 Thyroid (1E+4)	6E+3 Thyroid (2E+4)	3E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-124	D, all compounds	5E+1 Thyroid (2E+2)	8E+1 Thyroid (3E+2)	3E-8 -	- 4E-10	- 2E-6	- 2E-5
53	Iodine-125	D, all compounds	4E+1 Thyroid (1E+2)	6E+1 Thyroid (2E+2)	3E-8 -	- 3E-10	- 2E-6	- 2E-5
53	Iodine-126	D, all compounds	2E+1 Thyroid (7E+1)	4E+1 Thyroid (1E+2)	1E-8 -	- 2E-10	- 1E-6	- 1E-5
53	Iodine-128 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	5E-5 -	2E-7 -	- 8E-4	- 8E-3
53	Iodine-129	D, all compounds	5E+0 Thyroid (2E+1)	9E+0 Thyroid (3E+1)	4E-9 -	- 4E-11	- 2E-7	- 2E-6
53	Iodine-130	D, all compounds	4E+2 Thyroid (1E+3)	7E+2 Thyroid (2E+3)	3E-7 -	- 3E-9	- 2E-5	- 2E-4
53	Iodine-131	D, all compounds	3E+1 Thyroid (9E+1)	5E+1 Thyroid (2E+2)	2E-8 -	- 2E-10	- 1E-6	- 1E-5
53	Iodine-132m ²	D, all compounds	4E+3 Thyroid (1E+4)	8E+3 Thyroid (2E+4)	4E-6 -	- 3E-8	- 1E-4	- 1E-3
53	Iodine-132	D, all compounds	4E+3 Thyroid (9E+3)	8E+3 Thyroid (1E+4)	3E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-133	D, all compounds	1E+2 Thyroid (5E+2)	3E+2 Thyroid (9E+2)	1E-7 -	- 1E-9	- 7E-6	- 7E-5
53	Iodine-134 ²	D, all compounds	2E+4 Thyroid (3E+4)	5E+4 -	2E-5 -	6E-8 -	- 4E-4	- 4E-3
53	Iodine-135	D, all compounds	8E+2 Thyroid (3E+3)	2E+3 Thyroid (4E+3)	7E-7 -	- 6E-9	- 3E-5	- 3E-4
54	Xenon-120 ²	Submersion ¹	-	-	1E-5	4E-8	-	-
54	Xenon-121 ²	Submersion ¹	-	-	2E-6	1E-8	-	-
54	Xenon-122	Submersion ¹	-	-	7E-5	3E-7	-	-
54	Xenon-123	Submersion ¹	-	-	6E-6	3E-8	-	-
54	Xenon-125	Submersion ¹	-	-	2E-5	7E-8	-	-
54	Xenon-127	Submersion ¹	-	-	1E-5	6E-8	-	-
54	Xenon-129m	Submersion ¹	-	-	2E-4	9E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
54	Xenon-131m	Submersion ¹	-	-	4E-4	2E-6	-	-
54	Xenon-133m	Submersion ¹	-	-	1E-4	6E-7	-	-
54	Xenon-133	Submersion ¹	-	-	1E-4	5E-7	-	-
54	Xenon-135m ²	Submersion ¹	-	-	9E-6	4E-8	-	-
54	Xenon-135	Submersion ¹	-	-	1E-5	7E-8	-	-
54	Xenon-138 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
55	Cesium-125 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	-	-
		St wall	(9E+4)	-	-	-	1E-3	1E-2
55	Cesium-127	D, all compounds	6E+4	9E+4	4E-5	1E-7	9E-4	9E-3
55	Cesium-129	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
55	Cesium-130 ²	D, all compounds	6E+4	2E+5	8E-5	3E-7	-	-
		St wall	(1E+5)	-	-	-	1E-3	1E-2
55	Cesium-131	D, all compounds	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
55	Cesium-132	D, all compounds	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
55	Cesium-134m	D, all compounds	1E+5	1E+5	6E-5	2E-7	-	-
		St wall	(1E+5)	-	-	-	2E-3	2E-2
55	Cesium-134	D, all compounds	7E+1	1E+2	4E-8	2E-10	9E-7	9E-6
55	Cesium-135m ²	D, all compounds	1E+5	2E+5	8E-5	3E-7	1E-3	1E-2
55	Cesium-135	D, all compounds	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
55	Cesium-136	D, all compounds	4E+2	7E+2	3E-7	9E-10	6E-6	6E-5
55	Cesium-137	D, all compounds	1E+2	2E+2	6E-8	2E-10	1E-6	1E-5
55	Cesium-138 ²	D, all compounds	2E+4	6E+4	2E-5	8E-8	-	-
		St wall	(3E+4)	-	-	-	4E-4	4E-3
56	Barium-126 ²	D, all compounds	6E+3	2E+4	6E-6	2E-8	8E-5	8E-4
56	Barium-128	D, all compounds	5E+2	2E+3	7E-7	2E-9	7E-6	7E-5
56	Barium-131m ²	D, all compounds	4E+5	1E+6	6E-4	2E-6	-	-
		St wall	(5E+5)	-	-	-	7E-3	7E-2
56	Barium-131	D, all compounds	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
56	Barium-133m	D, all compounds	2E+3	9E+3	4E-6	1E-8	-	-
		LLI wall	(3E+3)	-	-	-	4E-5	4E-4
56	Barium-133	D, all compounds	2E+3	7E+2	3E-7	9E-10	2E-5	2E-4
56	Barium-135m	D, all compounds	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
56	Barium-139 ²	D, all compounds	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
56	Barium-140	D, all compounds	5E+2	1E+3	6E-7	2E-9	-	-
		LLI wall	(6E+2)	-	-	-	8E-6	8E-5
56	Barium-141 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
56	Barium-142 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
57	Lanthanum-131 ²	D, all compounds except those given for W, oxides and hydroxides	5E+4	1E+5	5E-5	2E-7	6E-4	6E-3
			-	2E+5	7E-5	2E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
57	Lanthanum-132	D, see ^{131}La	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
		W, see ^{131}La	-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-135	D, see ^{131}La	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see ^{131}La	-	9E+4	4E-5	1E-7	-	-
57	Lanthanum-137	D, see ^{131}La	1E+4	6E+1	3E-8	-	2E-4	2E-3
				Liver				
			-	(7E+1)	-	1E-10	-	-
		W, see ^{131}La	-	3E+2	1E-7	-	-	-
			-	Liver				
			-	(3E+2)	-	4E-10	-	-
57	Lanthanum-138	D, see ^{131}La	9E+2	4E+0	1E-9	5E-12	1E-5	1E-4
		W, see ^{131}La	-	1E+1	6E-9	2E-11	-	-
57	Lanthanum-140	D, see ^{131}La	6E+2	1E+3	6E-7	2E-9	9E-6	9E-5
		W, see ^{131}La	-	1E+3	5E-7	2E-9	-	-
57	Lanthanum-141	D, see ^{131}La	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		W, see ^{131}La	-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-142 ²	D, see ^{131}La	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ^{131}La	-	3E+4	1E-5	5E-8	-	-
57	Lanthanum-143 ²	D, see ^{131}La	4E+4	1E+5	4E-5	1E-7	-	-
				St wall				
			(4E+4)	-	-	-	5E-4	5E-3
58	Cerium-134	W, see ^{131}La	-	9E+4	4E-5	1E-7	-	-
		W, all compounds except those given for Y	5E+2	7E+2	3E-7	1E-9	-	-
			LLI wall					
			(6E+2)	-	-	-	8E-6	8E-5
		Y, oxides, hydroxides, and fluorides	-	7E+2	3E-7	9E-10	-	-
58	Cerium-135	W, see ^{134}Ce	2E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		Y, see ^{134}Ce	-	4E+3	1E-6	5E-9	-	-
58	Cerium-137m	W, see ^{134}Ce	2E+3	4E+3	2E-6	6E-9	-	-
			LLI wall					
			(2E+3)	-	-	-	3E-5	3E-4
		Y, see ^{134}Ce	-	4E+3	2E-6	5E-9	-	-
58	Cerium-137	W, see ^{134}Ce	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		Y, see ^{134}Ce	-	1E+5	5E-5	2E-7	-	-
58	Cerium-139	W, see ^{134}Ce	5E+3	8E+2	3E-7	1E-9	7E-5	7E-4
		Y, see ^{134}Ce	-	7E+2	3E-7	9E-10	-	-
58	Cerium-141	W, see ^{134}Ce	2E+3	7E+2	3E-7	1E-9	-	-
			LLI wall					
			(2E+3)	-	-	-	3E-5	3E-4
		Y, see ^{134}Ce	-	6E+2	2E-7	8E-10	-	-
58	Cerium-143	W, see ^{134}Ce	1E+3	2E+3	8E-7	3E-9	-	-
			LLI wall					
			(1E+3)	-	-	-	2E-5	2E-4
		Y, see ^{134}Ce	-	2E+3	7E-7	2E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
58	Cerium-144	W, see ^{134}Ce	2E+2	3E+1	1E-8	4E-11	-	-
		LLI wall	(3E+2)	-	-	-	3E-6	3E-5
		Y, see ^{134}Ce	-	1E+1	6E-9	2E-11	-	-
59	Praseodymium-136 ²	W, all compounds except those given for Y	5E+4	2E+5	1E-4	3E-7	-	-
		St wall	(7E+4)	-	-	-	1E-3	1E-2
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	9E-5	3E-7	-	-
59	Praseodymium-137 ²	W, see ^{136}Pr	4E+4	2E+5	6E-5	2E-7	5E-4	5E-3
		Y, see ^{136}Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-138m	W, see ^{136}Pr	1E+4	5E+4	2E-5	8E-8	1E-4	1E-3
		Y, see ^{136}Pr	-	4E+4	2E-5	6E-8	-	-
59	Praseodymium-139	W, see ^{136}Pr	4E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see ^{136}Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-142m ²	W, see ^{136}Pr	8E+4	2E+5	7E-5	2E-7	1E-3	1E-2
		Y, see ^{136}Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-142	W, see ^{136}Pr	1E+3	2E+3	9E-7	3E-9	1E-5	1E-4
		Y, see ^{136}Pr	-	2E+3	8E-7	3E-9	-	-
59	Praseodymium-143	W, see ^{136}Pr	9E+2	8E+2	3E-7	1E-9	-	-
		LLI wall	(1E+3)	-	-	-	2E-5	2E-4
		Y, see ^{136}Pr	-	7E+2	3E-7	9E-10	-	-
59	Praseodymium-144 ²	W, see ^{136}Pr	3E+4	1E+5	5E-5	2E-7	-	-
		St wall	(4E+4)	-	-	-	6E-4	6E-3
		Y, see ^{136}Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-145	W, see ^{136}Pr	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ^{136}Pr	-	8E+3	3E-6	1E-8	-	-
59	Praseodymium-147 ²	W, see ^{136}Pr	5E+4	2E+5	8E-5	3E-7	-	-
		St wall	(8E+4)	-	-	-	1E-3	1E-2
		Y, see ^{136}Pr	-	2E+5	8E-5	3E-7	-	-
60	Neodymium-136 ²	W, all compounds except those given for Y	1E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	5E+4	2E-5	8E-8	-	-
60	Neodymium-138	W, see ^{136}Nd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		Y, see ^{136}Nd	-	5E+3	2E-6	7E-9	-	-
60	Neodymium-139m	W, see ^{136}Nd	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		Y, see ^{136}Nd	-	1E+4	6E-6	2E-8	-	-
60	Neodymium-139 ²	W, see ^{136}Nd	9E+4	3E+5	1E-4	5E-7	1E-3	1E-2
		Y, see ^{136}Nd	-	3E+5	1E-4	4E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
60	Neodymium-141	W, see ¹³⁶ Nd	2E+5	7E+5	3E-4	1E-6	2E-3	2E-2
		Y, see ¹³⁶ Nd	-	6E+5	3E-4	9E-7	-	-
60	Neodymium-147	W, see ¹³⁶ Nd	1E+3	9E+2	4E-7	1E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹³⁶ Nd	-	8E+2	4E-7	1E-9	-	-
60	Neodymium-149 ²	W, see ¹³⁶ Nd	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
		Y, see ¹³⁶ Nd	-	2E+4	1E-5	3E-8	-	-
60	Neodymium-151 ²	W, see ¹³⁶ Nd	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		Y, see ¹³⁶ Nd	-	2E+5	8E-5	3E-7	-	-
61	Promethium-141 ²	W, all compounds except those given for Y	5E+4	2E+5	8E-5	3E-7	-	-
		St wall (6E+4)	-	-	-	-	8E-4	8E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	7E-5	2E-7	-	-
61	Promethium-143	W, see ¹⁴¹ Pm	5E+3	6E+2	2E-7	8E-10	7E-5	7E-4
		Y, see ¹⁴¹ Pm	-	7E+2	3E-7	1E-9	-	-
61	Promethium-144	W, see ¹⁴¹ Pm	1E+3	1E+2	5E-8	2E-10	2E-5	2E-4
		Y, see ¹⁴¹ Pm	-	1E+2	5E-8	2E-10	-	-
61	Promethium-145	W, see ¹⁴¹ Pm	1E+4	2E+2	7E-8	-	1E-4	1E-3
		Bone surf (2E+2)	-	-	-	3E-10	-	-
		Y, see ¹⁴¹ Pm	-	2E+2	8E-8	3E-10	-	-
61	Promethium-146	W, see ¹⁴¹ Pm	2E+3	5E+1	2E-8	7E-11	2E-5	2E-4
		Y see ¹⁴¹ Pm	-	4E+1	2E-8	6E-11	-	-
61	Promethium-147	W see ¹⁴¹ Pm	4E+3	1E+2	5E-8	-	-	-
		LLI wall (5E+3)	-	1E+2	6E-8	2E-10	-	-
		Y, see ¹⁴¹ Pm	-	1E+2	6E-8	2E-10	-	-
61	Promethium-148m	W, see ¹⁴¹ Pm	7E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		Y, see ¹⁴¹ Pm	-	3E+2	1E-7	5E-10	-	-
61	Promethium-148	W, see ¹⁴¹ Pm	4E+2	5E+2	2E-7	8E-10	-	-
		LLI wall (5E+2)	-	-	-	-	7E-6	7E-5
		Y, see ¹⁴¹ Pm	-	5E+2	2E-7	7E-10	-	-
0		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹⁴¹ Pm	-	2E+3	8E-7	2E-9	-	-
61	Promethium-150	W, see ¹⁴¹ Pm	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ¹⁴¹ Pm	-	2E+4	7E-6	2E-8	-	-
61	Promethium-151	W, see ¹⁴¹ Pm	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		Y, see ¹⁴¹ Pm	-	3E+3	1E-6	4E-9	-	-
62	Samarium-141m ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			62	Samarium-141 ²	W, all compounds	5E+4 St wall (6E+4)	2E+5 -	8E-5 -
62	Samarium-142 ²	W, all compounds	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
62	Samarium-145	W, all compounds	6E+3	5E+2	2E-7	7E-10	8E-5	8E-4
62	Samarium-146	W, all compounds	1E+1	4E2	1E-11	-	-	-
62	Samarium-147	W, all compounds	Bone surf (3E+1) 2E+1 Bone surf (3E+1)	Bone surf (6E-2) 4E2 Bone surf (7E-2)	- - 2E-11 -	9E-14 -	3E-7 -	3E-6 -
62	Samarium-151	W, all compounds	1E+4 LLI wall (1E+4)	1E+2 Bone surf (2E+2)	4E-8 -	- 2E-10	- 2E-4	- 2E-3
62	Samarium-153	W, all compounds	2E+3 LLI wall (2E+3)	3E+3 -	1E-6 -	4E-9 -	- 3E-5	- 3E-4
62	Samarium-155 ²	W, all compounds	6E+4 St wall (8E+4)	2E+5 -	9E-5 -	3E-7 -	- 1E-3	- 1E-2
62	Samarium-156	W, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
63	Europium-145	W, all compounds	2E+3	2E+3	8E-7	3E-9	2E-5	2E-4
63	Europium-146	W, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
63	Europium-147	W, all compounds	3E+3	2E+3	7E-7	2E-9	4E-5	4E-4
63	Europium-148	W, all compounds	1E+3	4E+2	1E-7	5E-10	1E-5	1E-4
63	Europium-149	W, all compounds	1E+4	3E+3	1E-6	4E-9	2E-4	2E-3
63	Europium-150 (12.62 h)	W, all compounds	3E+3	8E+3	4E-6	1E-8	4E-5	4E-4
63	Europium-150 (34.2 y)	W, all compounds	8E+2	2E+1	8E-9	3E-11	1E-5	1E-4
63	Europium-152m	W, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
63	Europium-152	W, all compounds	8E+2	2E+1	1E-8	3E-11	1E-5	1E-4
63	Europium-154	W, all compounds	5E+2	2E+1	8E-9	3E-11	7E-6	7E-5
63	Europium-155	W, all compounds	4E+3	9E+1	4E-8	-	5E-5	5E-4
63	Europium-156	W, all compounds	-	(1E+2)	-	2E-10	-	-
63	Europium-157	W, all compounds	6E+2	5E+2	2E-7	6E-10	8E-6	8E-5
63	Europium-158 ²	W, all compounds	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
63	Europium-158 ²	W, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
64	Gadolinium-145 ²	D, all compounds except those given for W	5E+4 St wall (5E+4)	2E+5 -	6E-5 -	2E-7 -	- 6E-4	- 6E-3
64	Gadolinium-146	W, oxides, hydroxides, and fluorides	-	2E+5	7E-5	2E-7	-	-
64	Gadolinium-146	D, see ¹⁴⁵ Gd	1E+3	1E+2	5E-8	2E-10	2E-5	2E-4
64	Gadolinium-146	W, see ¹⁴⁵ Gd	-	3E+2	1E-7	4E-10	-	-
64	Gadolinium-147	D, see ¹⁴⁵ Gd	2E+3	4E+3	2E-6	6E-9	3E-5	3E-4
64	Gadolinium-147	W, see ¹⁴⁵ Gd	-	4E+3	1E-6	5E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
64	Gadolinium-148	D, see ¹⁴⁵ Gd	1E+1 Bone surf (2E+1)	8E+3 Bone surf (2E+2)	3E-12 -	-	-	-
		W, see ¹⁴⁵ Gd	-	3E-2 Bone surf (6E-2)	1E-11 -	-	-	-
64	Gadolinium-149	D, see ¹⁴⁵ Gd	3E+3	2E+3	9E-7	3E-9	4E-5	4E-4
		W, see ¹⁴⁵ Gd	-	2E+3	1E-6	3E-9	-	-
64	Gadolinium-151	D, see ¹⁴⁵ Gd	6E+3	4E+2 Bone surf (6E+2)	2E-7 -	-	9E-5	9E-4
		W, see ¹⁴⁵ Gd	-	1E+3	5E-7	2E-9	-	-
64	Gadolinium-152	D, see ¹⁴⁵ Gd	2E+1 Bone surf (3E+1)	1E-2 Bone surf (2E-2)	4E-12 -	-	-	-
		W, see ¹⁴⁵ Gd	-	4E-2 Bone surf (8E-2)	2E-11 -	-	-	-
64	Gadolinium-153	D, see ¹⁴⁵ Gd	5E+3	1E+2 Bone surf (2E+2)	6E-8 -	-	6E-5	6E-4
		W, see ¹⁴⁵ Gd	-	6E+2	2E-7	8E-10	-	-
64	Gadolinium-159	D, see ¹⁴⁵ Gd	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ¹⁴⁵ Gd	-	6E+3	2E-6	8E-9	-	-
65	Terbium-147 ²	W, all compounds	9E+3	3E+4	1E-5	5E-8	1E-4	1E-3
65	Terbium-149	W, all compounds	5E+3	7E+2	3E-7	1E-9	7E-5	7E-4
65	Terbium-150	W, all compounds	5E+3	2E+4	9E-6	3E-8	7E-5	7E-4
65	Terbium-151	W, all compounds	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
65	Terbium-153	W, all compounds	5E+3	7E+3	3E-6	1E-8	7E-5	7E-4
65	Terbium-154	W, all compounds	2E+3	4E+3	2E-6	6E-9	2E-5	2E-4
65	Terbium-155	W, all compounds	6E+3	8E+3	3E-6	1E-8	8E-5	8E-4
65	Terbium-156m (5.0 h)	W, all compounds	2E+4	3E+4	1E-5	4E-8	2E-4	2E-3
65	Terbium-156m (24.4 h)	W, all compounds	7E+3	8E+3	3E-6	1E-8	1E-4	1E-3
65	Terbium-156	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
65	Terbium-157	W, all compounds	5E+4	3E+2	1E-7	-	-	-
			LLI wall (5E+4)	Bone surf (6E+2)	-	8E-10	7E-4	7E-3
65	Terbium-158	W, all compounds	1E+3	2E+1	8E-9	3E-11	2E-5	2E-4
65	Terbium-160	W, all compounds	8E+2	2E+2	9E-8	3E-10	1E-5	1E-4
65	Terbium-161	W, all compounds	2E+3	2E+3	7E-7	2E-9	-	-
			LLI wall (2E+3)	-	-	-	3E-5	3E-4
66	Dysprosium-155	W, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
66	Dysprosium-157	W, all compounds	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
66	Dysprosium-159	W, all compounds	1E+4	2E+3	1E-6	3E-9	2E-4	2E-3
66	Dysprosium-165	W, all compounds	1E+4	5E+4	2E-5	6E-8	2E-4	2E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
66	Dysprosium-166	W, all compounds	6E+2 LLI wall (8E+2)	7E+2 -	3E-7 -	1E-9 -	- 1E-5	- 1E-4
67	Holmium-155 ²	W, all compounds	4E+4	2E+5	6E-5	2E-7	6E-4	6E-3
67	Holmium-157 ²	W, all compounds	3E+5	1E+6	6E-4	2E-6	4E-3	4E-2
67	Holmium-159 ²	W, all compounds	2E+5	1E+6	4E-4	1E-6	3E-3	3E-2
67	Holmium-161	W, all compounds	1E+5	4E+5	2E-4	6E-7	1E-3	1E-2
67	Holmium-162m ²	W, all compounds	5E+4	3E+5	1E-4	4E-7	7E-4	7E-3
67	Holmium-162 ²	W, all compounds	5E+5 St wall (8E+5)	2E+6 -	1E-3 -	3E-6 -	- 1E-2	- 1E-1
67	Holmium-164m ²	W, all compounds	1E+5	3E+5	1E-4	4E-7	1E-3	1E-2
67	Holmium-164 ²	W, all compounds	2E+5 St wall (2E+5)	6E+5 -	3E-4 -	9E-7 -	- 3E-3	- 3E-2
67	Holmium-166m	W, all compounds	6E+2	7E+0	3E-9	9E-12	9E-6	9E-5
67	Holmium-166	W, all compounds	9E+2 LLI wall (9E+2)	2E+3 -	7E-7 -	2E-9 -	- 1E-5	- 1E-4
67	Holmium-167	W, all compounds	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
68	Erbium-161	W, all compounds	2E+4	6E+4	3E-5	9E-8	2E-4	2E-3
68	Erbium-165	W, all compounds	6E+4	2E+5	8E-5	3E-7	9E-4	9E-3
68	Erbium-169	W, all compounds	3E+3 LLI wall (4E+3)	3E+3 -	1E-6 -	4E-9 -	- 5E-5	- 5E-4
68	Erbium-171	W, all compounds	4E+3	1E+4	4E-6	1E-8	5E-5	5E-4
68	Erbium-172	W, all compounds	1E+3 LLI wall (E+3)	1E+3 -	6E-7 -	2E-9 -	- 2E-5	- 2E-4
69	Thulium-162 ²	W, all compounds	7E+4 St wall (7E+4)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2
69	Thulium-166	W, all compounds	4E+3	1E+4	6E-6	2E-8	6E-5	6E-4
69	Thulium-167	W, all compounds	2E+3 LLI wall (2E+3)	2E+3 -	8E-7 -	3E-9 -	- 3E-5	- 3E-4
69	Thulium-170	W, all compounds	8E+2 LLI wall (1E+3)	2E+2 -	9E-8 -	3E-10 -	- 1E-5	- 1E-4
69	Thulium-171	W, all compounds	1E+4 LLI wall (1E+4)	3E+2 (6E+2)	1E-7 -	- 8E-10	- 2E-4	- 2E-3
69	Thulium-172	W, all compounds	7E+2 LLI wall (8E+2)	1E+3 -	5E-7 -	2E-9 -	- 1E-5	- 1E-4
69	Thulium-173	W, all compounds	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
69	Thulium-175 ²	W, all compounds	7E+4 St wall (9E+4)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC (μCi/ml)	Col. 1 Air (μCi/ml)	Col.2 Water (μCi/ml)	Monthly Average Concentration (μCi/ml)
70	Ytterbium-162 ²	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	7E+4 -	3E+5 3E+5	1E-4 1E-4	4E-7 4E-7	1E-3 -	1E-2 -
70	Ytterbium-166	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+3 -	2E+3 2E+3	8E-7 8E-7	3E-9 3E-9	2E-5 -	2E-4 -
70	Ytterbium-167 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	3E+5 -	8E+5 7E+5	3E-4 3E-4	1E-6 1E-6	4E-3 -	4E-2 -
70	Ytterbium-169	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+3 -	8E+2 7E+2	4E-7 3E-7	1E-9 1E-9	2E-5 -	2E-4 -
70	Ytterbium-175	W, see ¹⁶² Yb	3E+3	4E+3	1E-6	5E-9	-	-
		LLI wall (3E+3)		-	-	-	4E-5	4E-4
		Y, see ¹⁶² Yb	-	3E+3	1E-6	5E-9	-	-
70	Ytterbium-177 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+4 -	5E+4 5E+4	2E-5 2E-5	7E-8 6E-8	2E-4 -	2E-3 -
70	Ytterbium-178 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+4 -	4E+4 4E+4	2E-5 2E-5	6E-8 5E-8	2E-4 -	2E-3 -
71	Lutetium-169	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	3E+3 -	4E+3 4E+3	2E-6 2E-6	6E-9 6E-9	3E-5 -	3E-4 -
71	Lutetium-170	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3 -	2E+3 2E+3	9E-7 8E-7	3E-9 3E-9	2E-5 -	2E-4 -
71	Lutetium-171	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	2E+3 -	2E+3 2E+3	8E-7 8E-7	3E-9 3E-9	3E-5 -	3E-4 -
71	Lutetium-172	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3 -	1E+3 1E+3	5E-7 5E-7	2E-9 2E-9	1E-5 -	1E-4 -
71	Lutetium-173	W, see ¹⁶⁹ Lu	5E+3	3E+2	1E-7	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (5E+2)	-	6E-10	-	-
71	Lutetium-174m	W, see ¹⁶⁹ Lu	2E+3	2E+2	1E-7	-	-	-
		LLI wall (3E+3)		Bone surf (3E+2)	-	5E-10	4E-5	4E-4
		Y, see ¹⁶⁹ Lu	-	2E+2	9E-8	3E-10	-	-
71	Lutetium-174	W, see ¹⁶⁹ Lu	5E+3	1E+2	5E-8	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (2E+2)	-	3E-10	-	-
		Y, see ¹⁶⁹ Lu	-	2E+2	6E-8	2E-10	-	-
71	Lutetium-176m	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	8E+3 -	3E+4 2E+4	1E-5 9E-6	3E-8 3E-8	1E-4 -	1E-3 -
71	Lutetium-176	W, see ¹⁶⁹ Lu	7E+2	5E+0	2E-9	-	1E-5	1E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (1E+1)	-	2E-11	-	-
		Y, see ¹⁶⁹ Lu	-	8E+0	3E-9	1E-1	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			71	Lutetium-177m	W, see ^{169}Lu	7E+2	1E+2	5E-8
				Bone surf				
			-	(1E+2)	-	2E-10	-	-
		Y, see ^{169}Lu	-	8E+1	3E-8	1E-10	-	-
71	Lutetium-177	W, see ^{169}Lu	2E+3	2E+3	9E-7	3E-9	-	-
			LLI wall					
			(3E+3)	-	-	-	4E-5	4E-4
		Y, see ^{169}Lu	-	2E+3	9E-7	3E-9	-	-
71	Lutetium-178m ²	W, see ^{169}Lu	5E+4	2E+5	8E-5	3E-7	-	-
			St. wall					
			(6E+4)	-	-	-	8E-4	8E-3
		Y, see ^{169}Lu	-	2E+5	7E-5	2E-7	-	-
71	Lutetium-178 ²	W, see ^{169}Lu	4E+4	1E+5	5E-5	2E-7	-	-
			St wall					
			(4E+4)	-	-	-	6E-4	6E-3
		Y, see ^{169}Lu	-	1E+5	5E-5	2E-7	-	-
71	Lutetium-179	W, see ^{169}Lu	6E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see ^{169}Lu	-	2E+4	6E-6	3E-8	-	-
72	Hafnium-170	D, all compounds except those given for W	3E+3	6E+3	2E-6	8E-9	4E-5	4E-4
		W, oxides, hydroxides, carbides, and nitrates	-	5E+3	2E-6	6E-9	-	-
72	Hafnium-172	D, see ^{170}Hf	1E+3	9E+0	4E-9	-	2E-5	2E-4
				Bone surf				
			-	(2E+1)	-	3E-11	-	-
		W, see ^{170}Hf	-	4E+1	2E-8	-	-	-
				Bone surf				
			-	(6E+1)	-	8E-11	-	-
72	Hafnium-173	D, see ^{170}Hf	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ^{170}Hf	-	1E+4	5E-6	2E-8	-	-
72	Hafnium-175	D, see ^{170}Hf	3E+3	9E+2	4E-7	-	4E-5	4E-4
				Bone surf				
			-	(1E+3)	-	1E-9	-	-
		W, see ^{170}Hf	-	1E+3	5E-7	2E-9	-	-
72	Hafnium-177m ²	D, see ^{170}Hf	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		W, see ^{170}Hf	-	9E+4	4E-5	1E-7	-	-
72	Hafnium-178m	D, see ^{170}Hf	3E+2	1E+0	5E-10	-	3E-6	3E-5
				Bone surf				
			-	(2E+0)	-	3E-12	-	-
		W, see ^{170}Hf	-	5E+0	2E-9	-	-	-
				Bone surf				
			-	(9E+0)	-	1E-11	-	-
72	Hafnium-179m	D, see ^{170}Hf	1E+3	3E+2	1E-7	-	1E-5	1E-4
				Bone surf				
			-	(6E+2)	-	8E-10	-	-
		W, see ^{170}Hf	-	6E+2	3E-7	8E-10	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			72	Hafnium-180m	D, see ^{170}Hf	7E+3	2E+4	9E-6
		W, see ^{170}Hf	-	3E+4	1E-5	4E-8	-	-
72	Hafnium-181	D, see ^{170}Hf	1E+3	2E+2	7E-8	-	2E-5	2E-4
				Bone surf (4E+2)	-	6E-10	-	-
		W, see ^{170}Hf	-	4E+2	2E-7	6E-10	-	-
72	Hafnium-182m ²	D, see ^{170}Hf	4E+4	9E+4	4E-5	1E-7	5E-4	5E-3
		W, see ^{170}Hf	-	1E+5	6E-5	2E-7	-	-
72	Hafnium-182	D, see ^{170}Hf	2E+2	8E-1	3E-10	-	-	-
			Bone surf (4E+2)	Bone surf (2E+0)	-	2E-12	5E-6	5E-5
		W, see ^{170}Hf	-	3E+0	1E-9	-	-	-
			-	Bone surf (7E+0)	-	1E-11	-	-
72	Hafnium-183 ²	D, see ^{170}Hf	2E+4	5E+4	2E-5	6E-8	3E-4	3E-3
		W, see ^{170}Hf	-	6E+4	2E-5	8E-8	-	-
72	Hafnium-184	D, see ^{170}Hf	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ^{170}Hf	-	6E+3	3E-6	9E-9	-	-
73	Tantalum-172 ²	W, all compounds except those given for Y Y, elemental Ta, oxides, hydroxides, halides, carbides, nitrates, and nitrides	4E+4	1E+5	5E-5	2E-7	5E-4	5E-3
			-	1E+5	4E-5	1E-7	-	-
73	Tantalum-173	W, see ^{172}Ta	7E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see ^{172}Ta	-	2E+4	7E-6	2E-8	-	-
73	Tantalum-174 ²	W, see ^{172}Ta	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
		Y, see ^{172}Ta	-	9E+4	4E-5	1E-7	-	-
73	Tantalum-175	W, see ^{172}Ta	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
		Y, see ^{172}Ta	-	1E+4	6E-6	2E-8	-	-
73	Tantalum-176	W, see ^{172}Ta	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
		Y, see ^{172}Ta	-	1E+4	5E-6	2E-8	-	-
73	Tantalum-177	W, see ^{172}Ta	1E+4	2E+4	8E-6	3E-8	2E-4	2E-3
		Y, see ^{172}Ta	-	2E+4	7E-6	2E-8	-	-
73	Tantalum-178	W, see ^{172}Ta	2E+4	9E+4	4E-5	1E-7	2E-4	2E-3
		Y, see ^{172}Ta	-	7E+4	3E-5	1E-7	-	-
73	Tantalum-179	W, see ^{172}Ta	2E+4	5E+3	2E-6	8E-9	3E-4	3E-3
		Y, see ^{172}Ta	-	9E+2	4E-7	1E-9	-	-
73	Tantalum-180m	W, see ^{172}Ta	2E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		Y, see ^{172}Ta	-	6E+4	2E-5	8E-8	-	-
73	Tantalum-180	W, see ^{172}Ta	1E+3	4E+2	2E-7	6E-10	2E-5	2E-4
		Y, see ^{172}Ta	-	2E+1	1E-8	3E-11	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			73	Tantalum-182m ²	W, see ¹⁷² Ta	2E+5 St wall (2E+5)	5E+5 -	2E-4 -
		Y, see ¹⁷² Ta	-	4E+5	2E-4	6E-7	-	-
73	Tantalum-182	W, see ¹⁷² Ta	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		Y, see ¹⁷² Ta	-	1E+2	6E-8	2E-10	-	-
73	Tantalum-183	W, see ¹⁷² Ta	9E+2 LLI wall (1E+3)	1E+3 -	5E-7 -	2E-9 -	- 2E-5	- 2E-4
		Y, see ¹⁷² Ta	-	1E+3	4E-7	1E-9	-	-
73	Tantalum-184	W, see ¹⁷² Ta	2E+3	5E+3	2E-6	8E-9	3E-5	3E-4
		Y, see ¹⁷² Ta	-	5E+3	2E-6	7E-9	-	-
73	Tantalum-185 ²	W, see ¹⁷² Ta	3E+4	7E+4	3E-5	1E-7	4E-4	4E-3
		Y, see ¹⁷² Ta	-	6E+4	3E-5	9E-8	-	-
73	Tantalum-186 ²	W, see ¹⁷² Ta	5E+4 St wall (7E+4)	2E+5 -	1E-4 -	3E-7 -	- 1E-3	- 1E-2
		Y, see ¹⁷² Ta	-	2E+5	9E-5	3E-7	-	-
74	Tungsten-176	D, all compounds	1E+4	5E+4	2E-5	7E-8	1E-4	1E-3
74	Tungsten-177	D, all compounds	2E+4	9E+4	4E-5	1E-7	3E-4	3E-3
74	Tungsten-178	D, all compounds	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
74	Tungsten-179 ²	D, all compounds	5E+5	2E+6	7E-4	2E-6	7E-3	7E-2
74	Tungsten-181	D, all compounds	2E+4	3E+4	1E-5	5E-8	2E-4	2E-3
74	Tungsten-185	D, all compounds	2E+3 LLI wall (3E+3)	7E+3 -	3E-6 -	9E-9 -	- 4E-5	- 4E-4
74	Tungsten-187	D, all compounds	2E+3	9E+3	4E-6	1E-8	3E-5	3E-4
74	Tungsten-188	D, all compounds	4E+2 LLI wall (5E+2)	1E+3 -	5E-7 -	2E-9 -	- 7E-6	- 7E-5
75	Rhenium-177 ²	D, all compounds except those given for W	9E+4 St wall (1E+5)	3E+5 -	1E-4 -	4E-7 -	- 2E-3	- 2E-2
		W, oxides, hydroxides, and nitrates	-	4E+5	1E-4	5E-7	-	-
75	Rhenium-178 ²	D, see ¹⁷⁷ Re	7E+4 St wall (1E+5)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2
		W, see ¹⁷⁷ Re	-	3E+5	1E-4	4E-7	-	-
75	Rhenium-181	D, see ¹⁷⁷ Re	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
		W, see ¹⁷⁷ Re	-	9E+3	4E-6	1E-8	-	-
75	Rhenium-182 (12.7 h)	D, see ¹⁷⁷ Re	7E+3	1E+4	5E-6	2E-8	9E-5	9E-4
		W, see ¹⁷⁷ Re	-	2E+4	6E-6	2E-8	-	-
75	Rhenium-182 (64.0 h)	D, see ¹⁷⁷ Re	1E+3	2E+3	1E-6	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+3	9E-7	3E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
75	Rhenium-184m	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	4E+2	2E-7	6E-10	-	-
75	Rhenium-184	D, see ¹⁷⁷ Re	2E+3	4E+3	1E-6	5E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	1E+3	6E-7	2E-9	-	-
75	Rhenium-186m	D, see ¹⁷⁷ Re	1E+3	2E+3	7E-7	-	-	-
		St wall	(2E+3)	(2E+3)	-	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+2	6E-8	2E-10	-	-
75	Rhenium-186	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	2E+3	7E-7	2E-9	-	-
75	Rhenium-187	D, see ¹⁷⁷ Re	6E+5	8E+5	4E-4	-	8E-3	8E-2
		St wall	-	(9E+5)	-	1E-6	-	-
		W, see ¹⁷⁷ Re	-	1E+5	4E-5	1E-7	-	-
75	Rhenium-188m ²	D, see ¹⁷⁷ Re	8E+4	1E+5	6E-5	2E-7	1E-3	1E-2
		W, see ¹⁷⁷ Re	-	1E+5	6E-5	2E-7	-	-
75	Rhenium-188	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	3E+3	1E-6	4E-9	-	-
75	Rhenium-189	D, see ¹⁷⁷ Re	3E+3	5E+3	2E-6	7E-9	4E-5	4E-4
		W, see ¹⁷⁷ Re	-	4E+3	2E-6	6E-9	-	-
76	Osmium-180 ²	D, all compounds except those given for W and Y	1E+5	4E+5	2E-4	5E-7	1E-3	1E-2
		W, halides and nitrates	-	5E+5	2E-4	7E-7	-	-
		Y, oxides and hydroxides	-	5E+5	2E-4	6E-7	-	-
76	Osmium-181 ²	D, see ¹⁸⁰ Os	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	5E+4	2E-5	6E-8	-	-
		Y, see ¹⁸⁰ Os	-	4E+4	2E-5	6E-8	-	-
76	Osmium-182	D, see ¹⁸⁰ Os	2E+3	6E+3	2E-6	8E-9	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
76	Osmium-185	D, see ¹⁸⁰ Os	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-
		Y, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-
76	Osmium-189m	D, see ¹⁸⁰ Os	8E+4	2E+5	1E-4	3E-7	1E-3	1E-2
		W, see ¹⁸⁰ Os	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁸⁰ Os	-	2E+5	7E-5	2E-7	-	-
76	Osmium-191m	D, see ¹⁸⁰ Os	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	2E+4	8E-6	3E-8	-	-
		Y, see ¹⁸⁰ Os	-	2E+4	7E-6	2E-8	-	-
76	Osmium-191	D, see ¹⁸⁰ Os	2E+3	2E+3	9E-7	3E-9	-	-
		LLI wall	(3E+3)	-	-	-	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	2E+3	7E-7	2E-9	-	-
		Y, see ¹⁸⁰ Os	-	1E+3	6E-7	2E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			76	Osmium-193	D, see ^{180}Os	2E+3	5E+3	2E-6
		LLI wall (2E+3)	-	-	-	-	2E-5	2E-4
		W, see ^{180}Os	-	3E+3	1E-6	4E-9	-	-
		Y, see ^{180}Os	-	3E+3	1E-6	4E-9	-	-
76	Osmium-194	D, see ^{180}Os	4E+2	4E+1	2E-8	6E-11	-	-
		LLI wall (6E+2)	-	-	-	-	8E-6	8E-5
		W, see ^{180}Os	-	6E+1	2E-8	8E-11	-	-
		Y, see ^{180}Os	-	8E+0	3E-9	1E-11	-	-
77	Iridium-182 ²	D, all compounds except those given for W and Y	4E+4	1E+5	6E-5	2E-7	-	-
		St wall (4E+4)	-	-	-	-	6E-4	6E-3
		W, halides, nitrates, and metallic iridium	-	2E+5	6E-5	2E-7	-	-
		Y, oxides and hydroxides	-	1E+5	5E-5	2E-7	-	-
77	Iridium-184	D, see ^{182}Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ^{182}Ir	-	3E+4	1E-5	5E-8	-	-
		Y, see ^{182}Ir	-	3E+4	1E-5	4E-8	-	-
77	Iridium-185	D, see ^{182}Ir	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ^{182}Ir	-	1E+4	5E-6	2E-8	-	-
		Y, see ^{182}Ir	-	1E+4	4E-6	1E-8	-	-
77	Iridium-186	D, see ^{182}Ir	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ^{182}Ir	-	6E+3	3E-6	9E-9	-	-
		Y, see ^{182}Ir	-	6E+3	2E-6	8E-9	-	-
77	Iridium-187	D, see ^{182}Ir	1E+4	3E+4	1E-5	5E-8	1E-4	1E-3
		W, see ^{182}Ir	-	3E+4	1E-5	4E-8	-	-
		Y, see ^{182}Ir	-	3E+4	1E-5	4E-8	-	-
77	Iridium-188	D, see ^{182}Ir	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		W, see ^{182}Ir	-	4E+3	1E-6	5E-9	-	-
		Y, see ^{182}Ir	-	3E+3	1E-6	5E-9	-	-
77	Iridium-189	D, see ^{182}Ir	5E+3	5E+3	2E-6	7E-9	-	-
		LLI wall (5E+3)	-	-	-	-	7E-5	7E-4
		W, see ^{182}Ir	-	4E+3	2E-6	5E-9	-	-
		Y, see ^{182}Ir	-	4E+3	1E-6	5E-9	-	-
77	Iridium-190m ²	D, see ^{182}Ir	2E+5	2E+5	8E-5	3E-7	2E-3	2E-2
		W, see ^{182}Ir	-	2E+5	9E-5	3E-7	-	-
		Y, see ^{182}Ir	-	2E+5	8E-5	3E-7	-	-
77	Iridium-190	D, see ^{182}Ir	1E+3	9E+2	4E-7	1E-9	1E-5	1E-4
		W, see ^{182}Ir	-	1E+3	4E-7	1E-9	-	-
		Y, see ^{182}Ir	-	9E+2	4E-7	1E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1	Col. 2	Col.3	Col. 1	Col.2	Monthly Average Concentration (µCi/ml)
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/ml)	Air (µCi/ml)	Water (µCi/ml)	
77	Iridium-192m	D, see ¹⁸² Ir	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
		W, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
		Y, see ¹⁸² Ir	-	2E+1	6E-9	2E-11	-	-
77	Iridium-192	D, see ¹⁸² Ir	9E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		W, see ¹⁸² Ir	-	4E+2	2E-7	6E-10	-	-
		Y, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
77	Iridium-194m	D, see ¹⁸² Ir	6E+2	9E+1	4E-8	1E-10	9E-6	9E-5
		W, see ¹⁸² Ir	-	2E+2	7E-8	2E-10	-	-
		Y, see ¹⁸² Ir	-	1E+2	4E-8	1E-10	-	-
77	Iridium-194	D, see ¹⁸² Ir	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see ¹⁸² Ir	-	2E+3	9E-7	3E-9	-	-
		Y, see ¹⁸² Ir	-	2E+3	8E-7	3E-9	-	-
77	Iridium-195m	D, see ¹⁸² Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		Y, see ¹⁸² Ir	-	2E+4	9E-6	3E-8	-	-
77	Iridium-195	D, see ¹⁸² Ir	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸² Ir	-	5E+4	2E-5	7E-8	-	-
		Y, see ¹⁸² Ir	-	4E+4	2E-5	6E-8	-	-
78	Platinum-186	D, all compounds	1E+4	4E+4	2E-5	5E-8	2E-4	2E-3
78	Platinum-188	D, all compounds	2E+3	2E+3	7E-7	2E-9	2E-5	2E-4
78	Platinum-189	D, all compounds	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
78	Platinum-191	D, all compounds	4E+3	8E+3	4E-6	1E-8	5E-5	5E-4
78	Platinum-193m	D, all compounds	3E+3	6E+3	3E-6	8E-9	-	-
		LLI wall	(3E+4)	-	-	-	4E-5	4E-4
78	Platinum-193	D, all compounds	4E+4	2E+4	1E-5	3E-8	-	-
		LLI wall	(5E+4)	-	-	-	6E-4	6E-3
78	Platinum-195m	D, all compounds	2E+3	4E+3	2E-6	6E-9	-	-
		LLI wall	(2E+3)	-	-	-	3E-5	3E-4
78	Platinum-197m ²	D, all compounds	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
78	Platinum-197	D, all compounds	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
78	Platinum-199 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
78	Platinum-200	D, all compounds	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
79	Gold-193	D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, halides and nitrates	-	2E+4	9E-6	3E-8	-	-
		Y, oxides and hydroxides	-	2E+4	8E-6	3E-8	-	-
79	Gold-194	D, see ¹⁹³ Au	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ¹⁹³ Au	-	5E+3	2E-6	8E-9	-	-
		Y, see ¹⁹³ Au	-	5E+3	2E-6	7E-9	-	-
79	Gold-195	D see ¹⁹³ Au	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W see ¹⁹³ Au	-	1E+3	6E-7	2E-9	-	-
		Y see ¹⁹³ Au	-	4E+2	2E-7	6E-10	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
79	Gold-198m	D see ¹⁹³ Au	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W see ¹⁹³ Au	-	1E+3	5E-7	2E-9	-	-
		Y see ¹⁹³ Au	-	1E+3	5E-7	2E-9	-	-
79	Gold-198	D see ¹⁹³ Au	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W see ¹⁹³ Au	-	2E+3	8E-7	3E-9	-	-
		Y see ¹⁹³ Au	-	2E+3	7E-7	2E-9	-	-
79	Gold-199	D see ¹⁹³ Au	3E+3	9E+3	4E-6	1E-8	-	-
		LLI wall (3E+3)	-	-	-	-	4E-5	4E-4
		W, see ¹⁹³ Au	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁹³ Au	-	4E+3	2E-6	5E-9	-	-
79	Gold-200m	D, see ¹⁹³ Au	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ¹⁹³ Au	-	3E+3	1E-6	4E-9	-	-
		Y, see ¹⁹³ Au	-	2E+4	1E-6	3E-9	-	-
79	Gold-200 ²	D, see ¹⁹³ Au	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see ¹⁹³ Au	-	8E+4	3E-5	1E-7	-	-
		Y, see ¹⁹³ Au	-	7E+4	3E-5	1E-7	-	-
79	Gold-201 ²	D, see ¹⁹³ Au	7E+4	2E+5	9E-5	3E-7	-	-
		St wall (9E+4)	-	-	-	-	1E-3	1E-2
		W, see ¹⁹³ Au	-	2E+5	1E-4	3E-7	-	-
		Y, see ¹⁹³ Au	-	2E+5	9E-5	3E-7	-	-
80	Mercury-193m	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		D, sulfates	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, oxides, hydroxides, halides, nitrates, and sulfides	-	8E+3	3E-6	1E-8	-	-
80	Mercury-193	Vapor	-	3E+4	1E-5	4E-8	-	-
		Organic D	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		D, see ^{193m} Hg	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ^{193m} Hg	-	4E+4	2E-5	6E-8	-	-
80	Mercury-194	Vapor	-	3E+1	1E-8	4E-11	-	-
		Organic D	2E+1	3E+1	1E-8	4E-11	2E-7	2E-6
		D, see ^{193m} Hg	8E+2	4E+1	2E-8	6E-11	1E-5	1E-4
		W, see ^{193m} Hg	-	1E+2	5E-8	2E-10	-	-
80	Mercury-195m	Vapor	-	4E+3	2E-6	6E-9	-	-
		Organic D	3E+3	6E+3	3E-6	8E-9	4E-5	4E-4
		D, see ^{193m} Hg	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
		W, see ^{193m} Hg	-	4E+3	2E-6	5E-9	-	-
80	Mercury-195	Vapor	-	3E+4	1E-5	4E-8	-	-
		Organic D	2E+4	5E+4	2E-5	6E-8	2E-4	2E-3
		D, see ^{193m} Hg	1E+4	4E+4	1E-5	5E-8	2E-4	2E-3
		W, see ^{193m} Hg	-	3E+4	1E-5	5E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
80	Mercury-197m	Vapor	-	5E+3	2E-6	7E-9	-	-
		Organic D	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		D, see ^{193m} Hg	3E+3	7E+3	3E-6	1E-8	4E-5	4E-4
		W, see ^{193m} Hg	-	5E+3	2E-6	7E-9	-	-
80	Mercury-197	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	7E+3	1E+4	6E-6	2E-8	9E-5	9E-4
		D, see ^{193m} Hg	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see ^{193m} Hg	-	9E+3	4E-6	1E-8	-	-
80	Mercury-199m ²	Vapor	-	8E+4	3E-5	1E-7	-	-
		Organic D	6E+4	2E+5	7E-5	2E-7	-	-
		St wall	(1E+5)	-	-	-	1E-3	1E-2
		D, see ^{193m} Hg	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
		W, see ^{193m} Hg	-	2E+5	7E-5	2E-7	-	-
80	Mercury-203	Vapor	-	8E+2	4E-7	1E-9	-	-
		Organic D	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
		D, see ^{193m} Hg	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		W, see ^{193m} Hg	-	1E+3	5E-7	2E-9	-	-
81	Thallium-194m ²	D, all compounds	5E+4	2E+5	6E-5	2E-7	-	-
		St wall	(7E+4)	-	-	-	1E-3	1E-2
81	Thallium-194 ²	D, all compounds	3E+5	6E+5	2E-4	8E-7	-	-
		St wall	(3E+5)	-	-	-	4E-3	4E-2
81	Thallium-195 ²	D, all compounds	6E+4	1E+5	5E-5	2E-7	9E-4	9E-3
81	Thallium-197	D, all compounds	7E+4	1E+5	5E-5	2E-7	1E-3	1E-2
81	Thallium-198m ²	D, all compounds	3E+4	5E+4	2E-5	8E-8	4E-4	4E-3
81	Thallium-198	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
81	Thallium-199	D, all compounds	6E+4	8E+4	4E-5	1E-7	9E-4	9E-3
81	Thallium-200	D, all compounds	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
81	Thallium-201	D, all compounds	2E+4	2E+4	9E-6	3E-8	2E-4	2E-3
81	Thallium-202	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
81	Thallium-204	D, all compounds	2E+3	2E+3	9E-7	3E-9	2E-5	2E-4
82	Lead-195m ²	D, all compounds	6E+4	2E+5	8E-5	3E-7	8E-4	8E-3
82	Lead-198	D, all compounds	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
82	Lead-199 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
82	Lead-200	D, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
82	Lead-201	D, all compounds	7E+3	2E+4	8E-6	3E-8	1E-4	1E-3
82	Lead-202m	D, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
82	Lead-202	D, all compounds	1E+2	5E+1	2E-8	7E-11	2E-6	2E-5
82	Lead-203	D, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
82	Lead-205	D, all compounds	4E+3	1E+3	6E-7	2E-9	5E-5	5E-4
82	Lead-209	D, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
82	Lead-210	D, all compounds	6E1	2E1	1E-10	-	-	-
		Bone surf	(1E+0)	(4E-1)	-	6E-13	1E-8	1E-7
82	Lead-211 ²	D, all compounds	1E+4	6E+2	3E-7	9E-10	2E-4	2E+3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
82	Lead-212	D, all compounds	8E+1	3E+1	1E-8	5E-11	-	-
			Bone surf (1E+2)	-	-	-	2E-6	2E-5
82	Lead-214 ²	D, all compounds	9E+3	8E+2	3E-7	1E-9	1E-4	1E-3
83	Bismuth-200 ²	D, nitrates	3E+4	8E+4	4E-5	1E-7	4E-4	4E-3
		W, all other compounds	-	1E+5	4E-5	1E-7	-	-
83	Bismuth-201 ²	D, see ²⁰⁰ Bi	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see ²⁰⁰ Bi	-	4E+4	2E-5	5E-8	-	-
83	Bismuth-202 ²	D, see ²⁰⁰ Bi	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ²⁰⁰ Bi	-	8E+4	3E-5	1E-7	-	-
83	Bismuth-203	D, see ²⁰⁰ Bi	2E+3	7E+3	3E-6	9E-9	3E-5	3E-4
		W, see ²⁰⁰ Bi	-	6E+3	3E-6	9E-9	-	-
83	Bismuth-205	D, see ²⁰⁰ Bi	1E+3	3E+3	1E-6	3E-9	2E-5	2E-4
		W, see ²⁰⁰ Bi	-	1E+3	5E-7	2E-9	-	-
83	Bismuth-206	D, see ²⁰⁰ Bi	6E+2	1E+3	6E-7	2E-9	9E-6	9E-5
		W, see ²⁰⁰ Bi	-	9E+2	4E-7	1E-9	-	-
83	Bismuth-207	D, see ²⁰⁰ Bi	1E+3	2E+3	7E-7	2E-9	1E-5	1E-4
		W, see ²⁰⁰ Bi	-	4E+2	1E-7	5E-10	-	-
83	Bismuth-210m	D, see ²⁰⁰ Bi	4E+1	5E+0	2E-9	-	-	-
			Kidneys (6E+1)	Kidneys (6E+0)	-	9E-12	8E-7	8E-6
		W, see ²⁰⁰ Bi	-	7E-1	3E-10	9E-13	-	-
83	Bismuth-210	D, see ²⁰⁰ Bi	8E+2	2E+2	1E-7	-	1E-5	1E-4
			-	Kidneys (4E+2)	-	5E-10	-	-
		W, see ²⁰⁰ Bi	-	3E+1	1E-8	4E-11	-	-
83	Bismuth-212 ²	D, see ²⁰⁰ Bi	5E+3	2E+2	1E-7	3E-10	7E-5	7E-4
		W, see ²⁰⁰ Bi	-	3E+2	1E-7	4E-10	-	-
83	Bismuth-213 ²	D, see ²⁰⁰ Bi	7E+3	3E+2	1E-7	4E-10	1E-4	1E-3
		W, see ²⁰⁰ Bi	-	4E+2	1E-7	5E-10	-	-
83	Bismuth-214 ²	D, see ²⁰⁰ Bi	2E+4	8E+2	3E-7	1E-9	-	-
			St wall (2E+4)	-	-	-	3E-4	3E-3
		W, see ²⁰⁰ Bi	-	9E-2	4E-7	1E-9	-	-
84	Polonium-203 ²	D, all compounds except those given for W	3E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		W, oxides, hydroxides, and nitrates	-	9E+4	4E-5	1E-7	-	-
84	Polonium-205 ²	D, see ²⁰³ Po	2E+4	4E+4	2E-5	5E-8	3E-4	3E-3
		W, see ²⁰³ Po	-	7E+4	3E-5	1E-7	-	-
84	Polonium-207	D, see ²⁰³ Po	8E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see ²⁰³ Po	-	3E+4	1E-5	4E-8	-	-
84	Polonium-210	D, see ²⁰³ Po	3E+0	6E-1	3E-10	9E-13	4E-8	4E-7
		W, see ²⁰³ Po	-	6E-1	3E-10	9E-13	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1	Col. 2	Col.3	Col. 1	Col.2	Monthly Average Concentration (µCi/ml)
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/ml)	Air (µCi/ml)	Water (µCi/ml)	
85	Astatine-207 ²	D, halides	6E+3	3E+3	1E-6	4E-9	8E-5	8E-4
		W	-	2E+3	9E-7	3E-9	-	-
85	Astatine-211	D, halides	1E+2	8E+1	3E-8	1E-10	2E-6	2E-5
		W	-	5E+1	2E-8	8E-11	-	-
86	Radon-220	With daughters removed	-	2E+4	7E-6	2E-8	-	-
		With daughters present	-	2E+1	9E-9	3E-11	-	-
			(or 12 working level months)			(or 1.0 working level)		
86	Radon-222	With daughters removed	-	1E+4	4E-6	1E-8	-	-
		With daughters present	-	1E+2	3E-8	1E-10	-	-
			(or 4 working level months)			(or 0.33 working level)		
87	Francium-222 ²	D, all compounds	2E+3	5E+2	2E-7	6E-10	3E-5	3E-4
87	Francium-223 ²	D, all compounds	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
88	Radium-223	W, all compounds	5E+0	7E-1	3E-10	9E-13	-	-
			Bone surf (9E+0)	-	-	-	1E-7	1E-6
88	Radium-224	W, all compounds	8E+0	2E+0	7E-10	2E-12	-	-
			Bone surf (2E+1)	-	-	-	2E-7	2E-6
88	Radium-225	W, all compounds	8E+0	7E-1	3E-10	9E-13	-	-
			Bone surf (2E+1)	-	-	-	2E-7	2E-6
88	Radium-226	W, all compounds	2E+0	6E-1	3E-10	9E-13	-	-
			Bone surf (5E+0)	-	-	-	6E-8	6E-7
88	Radium-227 ²	W, all compounds	2E+4	1E+4	6E-6	-	-	-
			Bone surf (2E+4)	Bone surf (2E+4)	-	3E-8	3E-4	3E-3
88	Radium-228	W, all compounds	2E+0	1E+0	5E-10	2E-12	-	-
			Bone surf (4E+0)	-	-	-	6E-8	6E-7
89	Actinium-224	D, all compounds except those given for W and Y	2E+3	3E+1	1E-8	-	-	-
			LLI wall (2E+3)	Bone surf (4E+1)	-	5E-11	3E-5	3E-4
		W, halides and nitrates	-	5E+1	2E-8	7E-11	-	-
		Y, oxides and hydroxides	-	5E+1	2E-8	6E-11	-	-
89	Actinium-225	D, see ²²⁴ Ac	5E+1	3E-1	1E-10	-	-	-
			LLI wall (5E+1)	Bone surf (5E-1)	-	7E-13	7E-7	7E-6
		W, see ²²⁴ Ac	-	6E-1	3E-10	9E-13	-	-
		Y, see ²²⁴ Ac	-	6E-1	3E-10	9E-13	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
89	Actinium-226	D, see ²²⁴ Ac	1E+2 LLI wall (1E+2)	3E+0 Bone surf (4E+0)	1E-9 -	-	-	2E-5
		W, see ²²⁴ Ac	-	5E+0	2E-9	7E-12	-	-
		Y, see ²²⁴ Ac	-	5E+0	2E-9	6E-12	-	-
89	Actinium-227	D, see ²²⁴ Ac	2E-1 Bone surf (4E-1)	4E-4 Bone surf (8E-4)	2E-13 -	-	1E-15	5E-8
		W, see ²²⁴ Ac	-	2E-3 Bone surf (3E-3)	7E-13 -	-	-	-
		Y, see ²²⁴ Ac	-	4E-3	2E-12	6E-15	-	-
89	Actinium-228	D, see ²²⁴ Ac	2E+3 -	9E+0 Bone surf (2E+1)	4E-9 -	-	3E-5	3E-4
		W see ²²⁴ Ac	-	4E+1 Bone surf (6E+1)	2E-8 -	-	-	-
		Y see ²²⁴ Ac	-	4E+1	2E-8	6E-11	-	-
90	Thorium-226 ²	W, all compounds except those given for Y	5E+3 St wall (5E+3)	2E+2 -	6E-8 -	2E-10	-	7E-4
		Y, oxides and hydroxides	-	1E+2	6E-8	2E-10	7E-5	-
90	Thorium-227	W, see ²²⁶ Th	1E+2	3E-1	1E-10	5E-13	2E-6	2E-5
		Y, see ²²⁶ Th	-	3E-1	1E-10	5E-13	-	-
90	Thorium-228	W, see ²²⁶ Th	6E+0 Bone surf (1E+1)	1E-2 Bone surf (2E-2)	4E-12 -	-	-	2E-6
		Y, see ²²⁶ Th	-	2E-2	7E-12	2E-14	-	-
90	Thorium-229	W, see ²²⁶ Th	6E-1 Bone surf (1E+0)	9E-4 Bone surf (2E-3)	4E-13 -	-	-	2E-7
		Y, see ²²⁶ Th	-	2E-3 Bone surf (3E-3)	1E-12 -	-	-	-
90	Thorium-230	W, see ²²⁶ Th	4E+0 Bone surf (9E+0)	6E-3 Bone surf (2E-2)	3E-12 -	-	-	-
		Y, see ²²⁶ Th	-	2E-2 Bone surf (2E-2)	6E-12 -	-	-	-
90	Thorium-231	W, see ²²⁸ Th	4E+3	6E+3	3E-6	9E-9	5E-5	5E-4
		Y, see ²²⁸ Th	-	6E+3	3E-6	9E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
90	Thorium-232	W, see ²²⁸ Th	7E-1 Bone surf (2E+0)	1E-3 Bone surf (3E-3)	5E-13 -	-	-	3E-7
		Y, see ²²⁸ Th	-	3E-3 Bone surf (4E-3)	1E-12 -	-	-	-
90	Thorium-234	W, see ²²⁸ Th	3E+2 LLI wall (4E+2)	2E+2 -	8E-8 -	3E-10 -	-	5E-5
		Y, see ²²⁸ Th	-	2E+2	6E-8	2E-10	-	-
91	Protactinium-227 ²	W, all compounds except those given for Y, oxides and hydroxides	4E+3 -	1E+2 1E+2	5E-8 4E-8	2E-10 1E-10	5E-5 -	5E-4 -
91	Protactinium-228	W, see ²²⁷ Pa	1E+3 -	1E+1 Bone surf (2E+1)	5E-9 -	-	2E-5 -	2E-4 -
		Y, see ²²⁷ Pa	-	1E+1	5E-9	2E-11	-	-
91	Protactinium-230	W, see ²²⁷ Pa	6E+2 Bone surf (9E+2)	5E+0 -	2E-9 -	7E-12 -	-	1E-5 1E-4
		Y, see ²²⁷ Pa	-	4E+0	1E-9	5E-12	-	-
91	Protactinium-231	W, see ²²⁷ Pa	2E-1 Bone surf (5E-1)	2E-3 Bone surf (4E-3)	6E-13 -	-	-	-
		Y, see ²²⁷ Pa	-	4E-3 Bone surf (6E-3)	2E-12 -	-	-	-
91	Protactinium-232	W, see ²²⁷ Pa	1E+3 -	2E+1 Bone surf (6E+1)	9E-9 -	-	2E-5 -	2E-4 -
		Y, see ²²⁷ Pa	-	6E+1 Bone surf (7E+1)	2E-8 -	-	-	-
91	Protactinium-233	W, see ²²⁷ Pa	1E+3 LLI wall (2E+3)	7E+2 -	3E-7 -	1E-9 -	-	-
		Y, see ²²⁷ Pa	-	6E+2	2E-7	8E-10	-	-
91	Protactinium-234	W, see ²²⁷ Pa	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		Y, see ²²⁷ Pa	-	7E+3	3E-6	9E-9	-	-
92	Uranium-230	D, UF, UOF, UO(NO)	4E+0 Bone surf (6E+0)	4E-1 Bone surf (6E-1)	2E-10 -	-	-	-
		W, UO, UF, UCl	-	4E-1	1E-10	5E-13	-	-
		Y, UO, UO	-	3E-1	1E-10	4E-13	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
92	Uranium-231	D, see ²³⁰ U	5E+3	8E+3	3E-6	1E-8	-	-
			LLI wall (4E+3)	-	-	-	6E-5	6E-4
		W, see ²³⁰ U	-	6E+3	2E-6	8E-9	-	-
92	Uranium-232	Y, see ²³⁰ U	-	5E+3	2E-6	6E-9	-	-
		D, see ²³⁰ U	2E+0	2E-1	9E-11	-	-	-
			Bone surf (4E+0)	Bone surf (4E-1)	-	6E-13	6E-8	6E-7
92	Uranium-233	W, see ²³⁰ U	-	4E-1	2E-10	5E-13	-	-
		Y, see ²³⁰ U	-	8E-3	3E-12	1E-14	-	-
		D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
92	Uranium-234 ³		Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
		W, see ²³⁰ U	-	7E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	5E-14	-	-
92	Uranium-235 ³	D, see ²³⁰ U	1E+1	1E+0	6E-10	-	-	-
			Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
92	Uranium-236	Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
		D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
			Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
92	Uranium-237	W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
		D, see ²³⁰ U	2E+3	3E+3	1E-6	4E-9	-	-
92	Uranium-238 ³		LLI wall (2E+3)	-	-	-	3E-5	3E-4
		W, see ²³⁰ U	-	2E+3	7E-7	2E-9	-	-
		Y, see ²³⁰ U	-	2E+3	6E-7	2E-9	-	-
92	Uranium-239 ²	D, see ²³⁰ U	1E+1	1E+0	6E-10	-	-	-
			Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
92	Uranium-239 ²	Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
		D, see ²³⁰ U	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		W, see ²³⁰ U	-	2E+5	7E-5	2E-7	-	-
	Y, see ²³⁰ U	-	2E+5	6E-5	2E-7	-	-	

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
92	Uranium-240	D, see ²³⁰ U	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see ²³⁰ U	-	3E+3	1E-6	4E-9	-	-
		Y, see ²³⁰ U	-	2E+3	1E-6	3E-9	-	-
92	Uranium-natural ³	D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
		Bone surf	(2E+1)	(2E+0)	-	3E-12	3E-7	3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	9E-13	-	-
		Y, see ²³⁰ U	-	5E-2	2E-11	9E-24	-	-
93	Neptunium-232 ²	W, all compounds	1E+5	2E+3	7E-7	-	2E-3	2E-2
		Bone surf	-	(5E+2)	-	6E-9	-	-
93	Neptunium-233 ²	W, all compounds	8E+5	3E+6	1E-3	4E-6	1E-2	1E-1
93	Neptunium-234	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
93	Neptunium-235	W, all compounds	2E+4	8E+2	3E-7	-	-	-
		LLI wall	(2E+4)	(1E+3)	-	2E-9	3E-4	3E-3
93	Neptunium-236 (1.15E+5 y)	W, all compounds	3E+0	2E-2	9E-12	-	-	-
		Bone surf	(6E+0)	(5E-2)	-	8E-14	9E-8	9E-7
93	Neptunium-236 (22.5 h)	W, all compounds	3E+3	3E+1	1E-8	-	-	-
		Bone surf	(4E+3)	(7E+1)	-	1E-10	5E-5	5E-4
93	Neptunium-237	W, all compounds	5E-1	4E-3	2E-12	-	-	-
		Bone surf	(1E+0)	(1E-2)	-	1E-14	2E-8	2E-7
93	Neptunium-238	W, all compounds	1E+3	6E+1	3E-8	-	2E-5	2E-4
		Bone surf	-	(2E+2)	-	2E-10	-	-
93	Neptunium-239	W, all compounds	2E+3	2E+3	9E-7	3E-9	-	-
		LLI wall	(2E+3)	-	-	-	2E-5	2E-4
93	Neptunium-240 ²	W, all compounds	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
94	Plutonium-234	W, all compounds except PuO	8E+3	2E+2	9E-8	3E-10	1E-4	1E-3
		Y, PuO	-	2E+2	8E-8	3E-10	-	-
94	Plutonium-235 ²	W, see ²³⁴ Pu	9E+5	3E+6	1E-3	4E-6	1E-2	1E-1
		Y, see ²³⁴ Pu	-	3E+6	1E-3	3E-6	-	-
94	Plutonium-236	W, see ²³⁴ Pu	2E+0	2E-2	8E-12	-	-	-
		Bone surf	(4E+0)	(4E-2)	-	5E-14	6E-8	6E-7
		Y, see ²³⁴ Pu	-	4E-2	2E-11	6E-14	-	-
94	Plutonium-237	W, see ²³⁴ Pu	1E+4	3E+3	1E-6	5E-9	2E-4	2E-3
		Y, see ²³⁴ Pu	-	3E+3	1E-6	4E-9	-	-
94	Plutonium-238	W, see ²³⁴ Pu	9E-1	7E-3	3E-12	-	-	-
		Bone surf	(2E+0)	(1E-2)	-	2E-14	2E-8	2E-7
		Y, see ²³⁴ Pu	-	2E-2	8E-12	2E-14	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
94	Plutonium-239	W, see ²³⁴ Pu	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-240	W, see ²³⁴ Pu	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-241	W, see ²³⁴ Pu	4E+1 Bone surf (7E+1)	3E-1 Bone surf (6E-1)	1E-10 -	-	-	1E-5
		Y, see ²³⁴ Pu	-	8E-1 Bone surf (1E+0)	3E-10 -	-	-	-
94	Plutonium-242	W, see ²³⁴ Pu	8E-1 Bone surf (1E+0)	7E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-243	W, see ²³⁴ Pu	2E+4	4E+4	2E-5	5E-8	2E-4	2E-3
		Y, see ²³⁴ Pu	-	4E+4	2E-5	5E-8	-	-
94	Plutonium-244	W, see ²³⁴ Pu	8E-1 Bone surf (2E+0)	7E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-245	W, see ²³⁴ Pu	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		Y, see ²³⁴ Pu	-	4E+3	2E-6	6E-9	-	-
94	Plutonium-246	W, see ²³⁴ Pu	4E+2 LLI wall (4E+2)	3E+2 -	1E-7 -	4E-10 -	- 6E-6	- 6E-5
		Y, see ²³⁴ Pu	-	3E+2	1E-7	4E-10	-	-
95	Americium-237 ²	W, all compounds	8E+4	3E+5	1E-4	4E-7	1E-3	1E-2
95	Americium-238 ²	W, all compounds	4E+4	3E+3	1E-6	-	5E-4	5E-3
			-	Bone surf (6E+3)	-	9E-9	-	-
95	Americium-239	W, all compounds	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
95	Americium-240	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
95	Americium-241	W, all compounds	8E-1	6E-3	3E-12	-	-	-
			Bone surf (1E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
95	Americium-242m	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
95	Americium-242	W, all compounds	4E+3	8E+1 Bone surf (9E+1)	4E-8 -	-	5E-5	5E-4
95	Americium-243	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
95	Americium-244m ²	W, all compounds	6E+4 St wall (8E+4)	4E+3 Bone surf (7E+3)	2E-6 -	-	-	-
95	Americium-244	W, all compounds	3E+3	2E+2 Bone surf (3E+2)	8E-8 -	-	4E-5	4E-4
95	Americium-245	W, all compounds	3E+4	8E+4	3E-5	1E-7	4E-4	4E-3
95	Americium-246m ²	W, all compounds	5E+4 St wall (6E+4)	2E+5 -	8E-5 -	3E-7	-	-
95	Americium-246 ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
96	Curium-238	W, all compounds	2E+4	1E+3	5E-7	2E-9	2E-4	2E-3
96	Curium-240	W, all compounds	6E+1 Bone surf (8E+1)	6E-1 Bone surf (6E-1)	2E-10 -	-	-	-
96	Curium-241	W, all compounds	1E+3	3E+1 Bone surf (4E+1)	1E-8 -	-	2E-5	2E-4
96	Curium-242	W, all compounds	3E+1 Bone surf (5E+1)	3E-1 Bone surf (3E-1)	1E-10 -	-	-	-
96	Curium-243	W, all compounds	1E+0	9E-3	4E-12	-	-	-
96	Curium-244	W, all compounds	2E+0 Bone surf (2E+0)	2E-2 Bone surf (2E-2)	-	2E-14	3E-8	3E-7
96	Curium-244	W, all compounds	1E+0 Bone surf (3E+0)	1E-2 Bone surf (2E-2)	5E-12 -	-	-	-
96	Curium-245	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
96	Curium-246	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
96	Curium-247	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
96	Curium-248	W, all compounds	2E-1 Bone surf (4E-1)	2E-3 Bone surf (3E-3)	7E-13 -	-	-	-
						4E-15	5E-9	5E-8

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			96	Curium-249 ²	W, all compounds	5E+4	2E+4	7E-6
				Bone surf				
			-	(3E+4)	-	4E-8	-	-
96	Curium-250	W, all compounds	4E-2	3E-4	1E-13	-	-	-
			Bone surf	Bone surf				
			(6E-2)	(5E-4)	-	8E-16	9E-10	9E-9
97	Berkelium-245	W, all compounds	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
97	Berkelium-246	W, all compounds	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
97	Berkelium-247	W, all compounds	5E-1	4E-3	2E-12	-	-	-
			Bone surf	Bone surf				
			(1E+0)	(9E-3)	-	1E-14	2E-8	2E-7
97	Berkelium-249	W, all compounds	2E+2	2E+0	7E-10	-	-	-
			Bone surf	Bone surf				
			(5E+2)	(4E+0)	-	5E-12	6E-6	6E-5
97	Berkelium-250	W, all compounds	9E+3	3E+2	1E-7	-	1E-4	1E-3
				Bone surf				
			-	(7E+2)	-	1E-9	-	-
98	Californium-244 ²	W, all compounds except those given for Y	3E+4	6E+2	2E-7	8E-10	-	-
			St wall					
			(3E+4)	-	-	-	4E-4	4E-3
		Y, oxides and hydroxides	-	6E+2	2E-7	8E-10	-	-
98	Californium-246	W, see ²⁴⁴ Cf	4E+2	9E+0	4E-9	1E-11	5E-6	5E-5
		Y, see ²⁴⁴ Cf	-	9E+0	4E-9	1E-11	-	-
98	Californium-248	W, see ²⁴⁴ Cf	8E+0	6E-2	3E-11	-	-	-
			Bone surf	Bone surf				
			(2E+1)	(1E-1)	-	2E-13	2E-7	2E-6
		Y, see ²⁴⁴ Cf	-	1E-1	4E-11	1E-13	-	-
98	Californium-249	W, see ²⁴⁴ Cf	5E-1	4E-3	2E-12	-	-	-
			Bone surf	Bone surf				
			(1E+0)	(9E-3)	-	1E-14	2E-8	2E-7
		Y, see ²⁴⁴ Cf	-	1E-2	4E-12	-	-	-
				Bone surf				
			-	(1E-2)	-	2E-14	-	-
98	Californium-250	W, see ²⁴⁴ Cf	1E+0	9E-3	4E-12	-	-	-
			Bone surf	Bone surf				
			(2E+0)	(2E-2)	-	3E-14	3E-8	3E-7
		Y, see ²⁴⁴ Cf	-	3E-2	1E-11	4E-14	-	-
98	Californium-251	W, see ²⁴⁴ Cf	5E-1	4E-3	2E-12	-	-	-
			Bone surf	Bone surf				
			(1E+0)	(9E-3)	-	1E-14	2E-8	2E-7
		Y, see ²⁴⁴ Cf	-	1E-2	4E-12	-	-	-
				Bone surf				
			-	(1E-2)	-	2E-14	-	-
98	Californium-252	W, see ²⁴⁴ Cf	2E+0	2E-2	8E-12	-	-	-
			Bone surf	Bone surf				
			(5E+0)	(4E-2)	-	5E-14	7E-8	7E-7
		Y, see ²⁴⁴ Cf	-	3E-2	1E-11	5E-14	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			98	Californium-253	W, see ²⁴⁴ Cf	2E+2	2E+0	8E-10
			Bone surf (4E+2)	-	-	-	5E-6	5E-5
		Y, see ²⁴⁴ Cf	-	2E+0	7E-10	2E-12	-	-
98	Californium-254	W, see ²⁴⁴ Cf	2E+0	2E-2	9E-12	3E-14	3E-8	3E-7
		Y, see ²⁴⁴ Cf	-	2E-2	7E-12	2E-14	-	-
99	Einsteinium-250	W, all compounds	4E+4	5E+2	2E-7	-	6E-4	6E-3
				Bone surf (1E+3)	-	2E-9	-	-
99	Einsteinium-251	W, all compounds	7E+3	9E+2	4E-7	-	1E-4	1E-3
				Bone surf (1E+3)	-	2E-9	-	-
99	Einsteinium-253	W, all compounds	2E+2	1E+0	6E-10	2E-12	2E-6	2E-5
99	Einsteinium-254m	W, all compounds	3E+2	1E+1	4E-9	1E-11	-	-
			LLI wall (3E+2)	-	-	-	4E-6	4E-5
99	Einsteinium-254	W, all compounds	8E+0	7E-2	3E-11	-	-	-
			Bone surf (2E+1)	Bone surf (1E-1)	-	2E-13	2E-7	2E-6
100	Fermium-252	W, all compounds	5E+2	1E+1	5E-9	2E-11	6E-6	6E-5
100	Fermium-253	W, all compounds	1E+3	1E+1	4E-9	1E-11	1E-5	1E-4
100	Fermium-254	W, all compounds	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
100	Fermium-255	W, all compounds	5E+2	2E+1	9E-9	3E-11	7E-6	7E-5
100	Fermium-257	W, all compounds	2E+1	2E-1	7E-11	-	-	-
			Bone surf (4E+1)	Bone surf (2E-1)	-	3E-13	5E-7	5E-6
101	Mendelevium-257	W, all compounds	7E+3	8E+1	4E-8	-	1E-4	1E-3
				Bone surf (9E+1)	-	1E-10	-	-
101	Mendelevium-258	W, all compounds	3E+1	2E-1	1E-10	-	-	-
			Bone surf (5E+1)	Bone surf (3E-1)	-	5E-13	6E-7	6E-6
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours	Submersion ¹	-	2E+2	1E-7	1E-9	-	-
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life greater than 2 hours.	...	-	2E-1	1E-10	1E-12	1E-8	1E-7

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC (μCi/ml)	Col. 1 Air (μCi/ml)	Col.2 Water (μCi/ml)	Monthly Average Concentration (μCi/ml)
	Any single radionuclide not listed above that decays by alpha emission or spontaneous fission, or any mixture for which either the identity or the concentration of any radionuclide in the mixture is not known.	...	-	4E-4	2E-13	1E-15	2E-9	2E-8

FOOTNOTES:

- ¹ "Submersion" means that values given are for submersion in a hemispherical semi-infinite cloud of airborne material.
- ² These radionuclides have radiological half-lives of less than 2 hours. The total effective dose equivalent received during operations with these radionuclides might include a significant contribution from external exposure. The DAC values for all radionuclides, other than those designated Class "Submersion," are based upon the committed effective dose equivalent due to the intake of the radionuclide into the body and do NOT include potentially significant contributions to dose equivalent from external exposures. The licensee may substitute 1E-7 μCi/ml for the listed DAC to account for the submersion dose prospectively but shall use individual monitoring devices or other radiation-measuring instruments that measure external exposure to demonstrate compliance with the limits. (See R12-1-410)
- ³ For soluble mixtures of U-238, U-234, and U-235 in air, chemical toxicity may be the limiting factor (see R12-1-408(E)). If the percent by weight (enrichment) of U-235 is not greater than 5, the concentration value for a 40-hour work week is 0.2 milligrams uranium per cubic meter of air average. For any enrichment, the product of the average concentration and time of exposure during a 40-hour work week shall not exceed 8E-3 (SA) μCi-hr/ml, where SA is the specific activity of the uranium inhaled. The specific activity for natural uranium is 6.77E-7 curies per gram U. The specific activity for other mixtures of U-238, U-235, and U-234, if not known, shall be:

$$SA = 3.6E-7 \text{ curies/gram U-depleted}$$

$$SA = [0.4 + 0.38 (\text{enrichment}) + 0.0034 (\text{enrichment})^2] E-6, \text{ enrichment} > 0.72$$
 where enrichment is the percentage by weight of U-235, expressed as percent.

NOTE:

- 1. If the identity of each radionuclide in a mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.
- 2. If the identity of each radionuclide in the mixture is not known, but it is known that certain radionuclides specified in this Appendix are not present in the mixture, the inhalation ALI, DAC, and effluent and sewage concentrations for the mixture are the lowest values specified in this Appendix for any radionuclide that is not known to be absent from the mixture; or

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC (μCi/ml)	Col. 1 Air (μCi/ml)	Col.2 Water (μCi/ml)	Monthly Average Concentration (μCi/ml)
	If it is known that Ac-227-D and Cm-250-W are not present		-	7E-4	3E-13	-	-	-
	If, in addition, it is known that Ac-227-W,Y, Th-229-W,Y, Th-230-W, Th-232-W,Y, Pa-231-W,Y, Np-237-W, Pu-239-W, Pu-240-W, Pu-242-W, Am-241-W, Am-242m-W, Am-243-W, Cm-245-W, Cm-246-W, Cm-247-W, Cm-248-W, Bk-247-W, Cf-249-W, and Cf-251-W are not present		-	7E-3	3E-12	-	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC (μCi/ml)	Col. 1 Air (μCi/ml)	Col.2 Water (μCi/ml)	Monthly Average Concentration (μCi/ml)
	If, in addition, it is known that Sm-146-W, Sm-147-W, Gd-148-D,W, Gd-152-D,W, Th-228-W,Y, Th-230-Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, Np-236-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-Y, Pu-240-Y, Pu-242-Y, Pu-244-W,Y, Cm-243-W, Cm-244-W, Cf-248-W, Cf-249-Y, Cf-250-W,Y, Cf-251-Y, Cf-252-WY, and Cf-254-W,Y are not present		-	7E-2	3E-11	-	-	-
	If, in addition, it is known that Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-Y, Es-254-W, Fm-257-W, and Md-258-W are not present		-	7E-1	3E-10	-	-	-
	If, in addition, it is known that Si-32-Y, Ti-44-Y, Fe-60-D, Sr-90-Y, Zr-93-D, Cd-113m-D, Cd-113-D, In-115-D,W, La-138-D, Lu-176-W, Hf-178m-D,W, Hf-182-D,W, Bi-210m-D, Ra-224-W, Ra-228-W, Ac-226-D,W,Y, Pa-230-W,Y, U-233-D,W, U-234-D,W, U-235-D,W, U-236-D,W, U-238-D,W, Pu-241-Y, Bk-249-W, Cf-253-W,Y, and Es-253-W are not present		-	7E+0	3E-9	-	-	-
	If it is known that Ac-227-D,W,Y, Th-229-W,Y, Th-232-W,Y, Pa-231-W,Y, Cm-248-W, and Cm-250-W are not present		-	-	-	1E-14	-	-
	If, in addition, it is known that Sm-146-W, Gd-148-D,W, Gd-152-D, Th-228-W,Y, Th-230-W,Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, U-Nat-Y, Np-236-W, Np-237-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-W,Y, Pu-240-W,Y, Pu-242-W,Y, Pu-244-W,Y, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-244-W, Cm-245-W, Cm-246-W, Cm-247-W, Bk-247-W, Cf-249-W,Y, Cf-250-W,Y, Cf-251-W,Y, Cf-252-W,Y, and Cf-254-W,Y are not present		-	-	-	1E-13	-	-
	If, in addition, it is known that Sm-147-W, Gd-152-W, Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, U-Nat-W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-W,Y, Es-254-W, Fm-257-W, and Md-258-W are not present		-	-	-	-	1E-12	-
	If, in addition it is known that Fe-60, Sr-90, Cd-113m, Cd-113, In-115, I-129, Cs-134, Sm-145, Sm-147, Gd-148, Gd-152, Hg-194 (organic), Bi-210m, Ra-223, Ra-224, Ra-225, Ac-225, Th-228, Th-230, U-233, U-234, U-235, U-236, U-238, U-Nat, Cm-242, Cf-248, Es-254, Fm-257, and Md-258 are not present		-	-	-	-	1E-6	1E-5

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3. If a mixture of radionuclides consists of Uranium and its daughters in ore dust (10 μm AMAD particle distribution assumed) prior to chemical separation of the Uranium from the ore, the following values may be used for the DAC of the mixture: 6E-11 μCi of gross alpha activity from Uranium-238, Uranium-234, Thorium-230, and Radium-226 per milliliter of air; 3E-11 μCi of natural uranium per milliliter of air; or 45 micrograms of natural uranium per cubic meter of air.
4. If the identity and concentration of each radionuclide in a mixture are known, the limiting values should be derived as follows: determine, for each radionuclide in the mixture, the ratio between the concentration present in the mixture and the concentration otherwise established in Appendix B to Article 4 for the specific radionuclide when not in a mixture. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity").
Example: If radionuclides "A," "B," and "C" are present in concentrations C_A , C_B , and C_C , and if the applicable DACs are DAC_A , DAC_B , and DAC_C respectively then the concentrations shall be limited so that the following relationship exists:

$$\frac{C_A}{\text{DAC}_A} + \frac{C_B}{\text{DAC}_B} + \frac{C_C}{\text{DAC}_C} \leq 1$$

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed; new Section adopted effective August 10, 1994 (Supp. 94-3).

Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

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APPENDIX C. QUANTITIES¹ OF LICENSED OR REGISTERED MATERIAL REQUIRING LABELING

Radionuclide	Quantity (μ Ci)	Radionuclide	Quantity (μ Ci)
Hydrogen-3	1,000	Nickel-56	100
Beryllium-7	1,000	Nickel-57	100
Beryllium-10	1	Nickel-59	100
Carbon-11	1,000	Nickel-63	100
Carbon-14	1,000	Nickel-65	1,000
Fluorine-18	1,000	Nickel-66	10
Sodium-22	10	Copper-60	1,000
Sodium-24	100	Copper-61	1,000
Magnesium-28	100	Copper-64	1,000
Aluminum-26	10	Copper-67	1,000
Silicon-31	1,000	Zinc-62	100
Silicon-32	1	Zinc-63	1,000
Phosphorus-32	10	Zinc-65	10
Phosphorus-33	100	Zinc-69m	100
Sulfur-35	100	Zinc-69	1,000
Chlorine-36	10	Zinc-71m	1,000
Chlorine-38	1,000	Zinc-72	100
Chlorine-39	1,000	Gallium-65	1,000
Argon-39	1,000	Gallium-66	100
Argon-41	1,000	Gallium-67	1,000
Potassium-40	100	Gallium-68	1,000
Potassium-42	1,000	Gallium-70	1,000
Potassium-43	1,000	Gallium-72	100
Potassium-44	1,000	Gallium-73	1,000
Potassium-45	1,000	Germanium-66	1,000
Calcium-41	100	Germanium-67	1,000
Calcium-45	100	Germanium-68	10
Calcium-47	100	Germanium-69	1,000
Scandium-43	1,000	Germanium-71	1,000
Scandium-44m	100	Germanium-75	1,000
Scandium-44	100	Germanium-77	1,000
Scandium-46	10	Germanium-78	1,000
Scandium-47	100	Arsenic-69	1,000
Scandium-48	100	Arsenic-70	1,000
Scandium-49	1,000	Arsenic-71	100
Titanium-44	1	Arsenic-72	100
Titanium-45	1,000	Arsenic-73	100
Vanadium-47	1,000	Arsenic-74	100
Vanadium-48	100	Arsenic-76	100
Vanadium-49	1,000	Arsenic-77	100
Chromium-48	1,000	Arsenic-78	1,000
Chromium-49	1,000	Selenium-70	1,000
Chromium-51	1,000	Selenium-73m	1,000
Manganese-51	1,000	Selenium-73	100
Manganese-52m	1,000	Selenium-75	100
Manganese-52	100	Selenium-79	100
Manganese-53	1,000	Selenium-81m	1,000
Manganese-54	100	Selenium-81	1,000
Manganese-56	1,000	Selenium-83	1,000
Iron-52	100	Bromine-74m	1,000
Iron-55	100	Bromine-74	1,000
Iron-59	10	Bromine-75	1,000
Iron-60	1	Bromine-76	100
Cobalt-55	100	Bromine-77	1,000
Cobalt-56	10	Bromine-80m	1,000
Cobalt-57	100	Bromine-80	1,000
Cobalt-58m	1,000	Bromine-82	100
Cobalt-58	100	Bromine-83	1,000
Cobalt-60m	1,000	Bromine-84	1,000
Cobalt-60	1	Krypton-74	1,000
Cobalt-61	1,000	Krypton-76	1,000
Cobalt-62m	1,000	Krypton-77	1,000

*To convert μ Ci to kBq, multiply the μ Ci value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Krypton-79	1,000	Technetium-93m	1,000
Krypton-81	1,000	Technetium-93	1,000
Krypton-83m	1,000	Technetium-94m	1,000
Krypton-85m	1,000	Technetium-94	1,000
Krypton-85	1,000	Technetium-96m	1,000
Krypton-87	1,000	Technetium-96	100
Krypton-88	1,000	Technetium-97m	100
Rubidium-79	1,000	Technetium-97	1,000
Rubidium-81m	1,000	Technetium-98	10
Rubidium-81	1,000	Technetium-99m	1,000
Rubidium-82m	1,000	Technetium-99	100
Rubidium-83	100	Technetium-101	1,000
Rubidium-84	100	Technetium-104	1,000
Rubidium-86	100	Ruthenium-94	1,000
Rubidium-87	100	Ruthenium-97	1,000
Rubidium-88	1,000	Ruthenium-103	100
Rubidium-89	1,000	Ruthenium-105	1,000
Strontium-80	100	Ruthenium-106	1
Strontium-81	1,000	Rhodium-99m	1,000
Strontium-83	100	Rhodium-99	100
Strontium-85m	1,000	Rhodium-100	100
Strontium-85	100	Rhodium-101m	1,000
Strontium-87m	1,000	Rhodium-101	10
Strontium-89	10	Rhodium-102m	10
Strontium-90	0.1	Rhodium-102	10
Strontium-91	100	Rhodium-103m	1,000
Strontium-92	100	Rhodium-105	100
Yttrium-86m	1,000	Rhodium-106m	1,000
Yttrium-86	100	Rhodium-107	1,000
Yttrium-87	100	Palladium-100	100
Yttrium-88	10	Palladium-101	1,000
Yttrium-90m	1,000	Palladium-103	100
Yttrium-90	10	Palladium-107	10
Yttrium-91m	1,000	Palladium-109	100
Yttrium-91	10	Silver-102	1,000
Yttrium-92	100	Silver-103	1,000
Yttrium-93	100	Silver-104m	1,000
Yttrium-94	1,000	Silver-104	1,000
Yttrium-95	1,000	Silver-105	100
Zirconium-86	100	Silver-106m	100
Zirconium-88	10	Silver-106	1,000
Zirconium-89	100	Silver-108m	1
Zirconium-93	1	Silver-110m	10
Zirconium-95	10	Silver-111	100
Zirconium-97	100	Silver-112	100
Niobium-88	1,000	Silver-115	1,000
Niobium-89m (66 min)	1,000	Cadmium-104	1,000
Niobium-89 (122 min)	1,000	Cadmium-107	1,000
Niobium-90	100	Cadmium-109	1
Niobium-93m	10	Cadmium-113m	0.1
Niobium-94	1	Cadmium-113	100
Niobium-95m	100	Cadmium-115m	10
Niobium-95	100	Cadmium-115	100
Niobium-96	100	Cadmium-117m	1,000
Niobium-97	1,000	Cadmium-117	1,000
Niobium-98	1,000	Indium-109	1,000
Molybdenum-90	100	Indium-110m	
Molybdenum-93m	100	(69.1m)	1,000
Molybdenum-93	10	Indium-110 (4.9h)	1,000
Molybdenum-99	100	Indium-111	100
Molybdenum-101	1,000	Indium-112	1,000
		Indium-113m	1,000

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Indium-114m	10	Iodine-123	100
Indium-115m	1,000	Iodine-124	10
Indium-115	100	Iodine-125	1
Indium-116m	1,000	Iodine-126	1
Indium-117m	1,000	Iodine-128	1,000
Indium-117	1,000	Iodine-129	1
Indium-119m	1,000	Iodine-130	10
Tin-110	100	Iodine-131	1
Tin-111	1,000	Iodine-132m	100
Tin-113	100	Iodine-132	100
Tin-117m	100	Iodine-133	10
Tin-119m	100	Iodine-134	1,000
Tin-121m	100	Iodine-135	100
Tin-121	1,000	Xenon-120	1,000
Tin-123m	1,000	Xenon-121	1,000
Tin-123	10	Xenon-122	1,000
Tin-125	10	Xenon-123	1,000
Tin-126	10	Xenon-125	1,000
Tin-127	1,000	Xenon-127	1,000
Tin-128	1,000	Xenon-129m	1,000
Antimony-115	1,000	Xenon-131m	1,000
Antimony-116m	1,000	Xenon-133m	1,000
Antimony-116	1,000	Xenon-133	1,000
Antimony-117	1,000	Xenon-135m	1,000
Antimony-118m	1,000	Xenon-135	1,000
Antimony-119	1,000	Xenon-138	1,000
Antimony-120 (16m)	1,000	Cesium-125	1,000
Antimony-120 (5.76d)	100	Cesium-127	1,000
Antimony-122	100	Cesium-129	1,000
Antimony-124m	1,000	Cesium-130	1,000
Antimony-124	10	Cesium-131	1,000
Antimony-125	100	Cesium-132	100
Antimony-126m	1,000	Cesium-134m	1,000
Antimony-126	100	Cesium-134	10
Antimony-127	100	Cesium-135m	1,000
Antimony-128 (10.4m)	1,000	Cesium-135	100
Antimony-128 (9.01h)	100	Cesium-136	10
Antimony-129	100	Cesium-137	10
Antimony-130	1,000	Cesium-138	1,000
Antimony-131	1,000	Barium-126	1,000
Tellurium-116	1,000	Barium-128	100
Tellurium-121m	10	Barium-131m	1,000
Tellurium-121	100	Barium-131	100
Tellurium-123m	10	Barium-133m	100
Tellurium-123	100	Barium-133	100
Tellurium-125m	10	Barium-135m	100
Tellurium-127m	10	Barium-139	1,000
Tellurium-127	1,000	Barium-140	100
Tellurium-129m	10	Barium-141	1,000
Tellurium-129	1,000	Barium-142	1,000
Tellurium-131m	10	Lanthanum-131	1,000
Tellurium-131	100	Lanthanum-132	100
Tellurium-132	10	Lanthanum-135	1,000
Tellurium-133m	100	Lanthanum-137	10
Tellurium-133	1,000	Lanthanum-138	100
Tellurium-134	1,000	Lanthanum-140	100
Iodine-120m	1,000	Lanthanum-141	100
Iodine-120	100	Lanthanum-142	1,000
Iodine-121	1,000	Lanthanum-143	1,000
		Cerium-134	100
		Cerium-135	100
		Cerium-137m	100
		Cerium-137	1,000

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Cerium-139	100	Gadolinium-149	100
Cerium-141	100	Gadolinium-151	10
Cerium-143	100	Gadolinium-152	100
Cerium-144	1	Gadolinium-153	10
Praseodymium-136	1,000	Gadolinium-159	100
Praseodymium-137	1,000	Terbium-147	1,000
Praseodymium-138m	1,000	Terbium-149	100
Praseodymium-139	1,000	Terbium-150	1,000
Praseodymium-142m	1,000	Terbium-151	100
Praseodymium-142	100	Terbium-153	1,000
Praseodymium-143	100	Terbium-154	100
Praseodymium-144	1,000	Terbium-155	1,000
Praseodymium-145	100	Terbium-156m	
Praseodymium-147	1,000	(5.0h)	1,000
Neodymium-136	1,000	Terbium-156m	
Neodymium-138	100	(24.4h)	1,000
Neodymium-139m	1,000	Terbium-156	100
Neodymium-139	1,000	Terbium-157	10
Neodymium-141	1,000	Terbium-158	1
Neodymium-147	100	Terbium-160	10
Neodymium-149	1,000	Terbium-161	100
Neodymium-151	1,000	Dysprosium-155	1,000
Promethium-141	1,000	Dysprosium-157	1,000
Promethium-143	100	Dysprosium-159	100
Promethium-144	10	Dysprosium-165	1,000
Promethium-145	10	Dysprosium-166	100
Promethium-146	1	Holmium-155	1,000
Promethium-147	10	Holmium-157	1,000
Promethium-148m	10	Holmium-159	1,000
Promethium-148	10	Holmium-161	1,000
Promethium-149	100	Holmium-162m	1,000
Promethium-150	1,000	Holmium-162	1,000
Promethium-151	100	Holmium-164m	1,000
Samarium-141m	1,000	Holmium-164	1,000
Samarium-141	1,000	Holmium-166m	1
Samarium-142	1,000	Holmium-166	100
Samarium-145	100	Holmium-167	1,000
Samarium-146	1	Erbium-161	1,000
Samarium-147	100	Erbium-165	1,000
Samarium-151	10	Erbium-169	100
Samarium-153	100	Erbium-171	100
Samarium-155	1,000	Erbium-172	100
Samarium-156	1,000	Thulium-162	1,000
Europium-145	100	Thulium-166	100
Europium-146	100	Thulium-167	100
Europium-147	100	Thulium-170	10
Europium-148	10	Thulium-171	10
Europium-149	100	Thulium-172	100
Europium-150		Thulium-173	100
(12.62h)	100	Thulium-175	1,000
Europium-150		Ytterbium-162	1,000
(34.2y)	1	Ytterbium-166	100
Europium-152m	100	Ytterbium-167	1,000
Europium-152	1	Ytterbium-169	100
Europium-154	1	Ytterbium-175	100
Europium-155	10	Ytterbium-177	1,000
Europium-156	100	Ytterbium-178	1,000
Europium-157	100	Lutetium-169	100
Europium-158	1,000	Lutetium-170	100
Gadolinium-145	1,000	Lutetium-171	100
Gadolinium-146	10	Lutetium-172	100
Gadolinium-147	100	Lutetium-173	10
Gadolinium-148	0.001	Lutetium-174m	10

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Lutetium-174	10	Osmium-185	100
Lutetium-176m	1,000	Osmium-189m	1,000
Lutetium-176	100	Osmium-191m	1,000
Lutetium-177m	10	Osmium-191	100
Lutetium-177	100	Osmium-193	100
Lutetium-178m	1,000	Osmium-194	1
Lutetium-178	1,000	Iridium-182	1,000
Lutetium-179	1,000	Iridium-184	1,000
Hafnium-170	100	Iridium-185	1,000
Hafnium-172	1	Iridium-186	100
Hafnium-173	1,000	Iridium-187	1,000
Hafnium-175	100	Iridium-188	100
Hafnium-177m	1,000	Iridium-189	100
Hafnium-178m	0.1	Iridium-190m	1,000
Hafnium-179m	10	Iridium-190	100
Hafnium-180m	1,000	Iridium-192m	
Hafnium-181	10	(1.4m)	10
Hafnium-182m	1,000	Iridium-192	
Hafnium-182	0.1	(73.8d)	1
Hafnium-183	1,000	Iridium-194m	10
Hafnium-184	100	Iridium-194	100
Tantalum-172	1,000	Iridium-195m	1,000
Tantalum-173	1,000	Iridium-195	1,000
Tantalum-174	1,000	Platinum-186	1,000
Tantalum-175	1,000	Platinum-188	100
Tantalum-176	100	Platinum-189	1,000
Tantalum-177	1,000	Platinum-191	100
Tantalum-178	1,000	Platinum-193m	100
Tantalum-179	100	Platinum-193	1,000
Tantalum-180m	1,000	Platinum-195m	100
Tantalum-180	100	Platinum-197m	1,000
Tantalum-182m	1,000	Platinum-197	100
Tantalum-182	10	Platinum-199	1,000
Tantalum-183	100	Platinum-200	100
Tantalum-184	100	Gold-193	1,000
Tantalum-185	1,000	Gold-194	100
Tantalum-186	1,000	Gold-195	10
Tungsten-176	1,000	Gold-198m	100
Tungsten-177	1,000	Gold-198	100
Tungsten-178	1,000	Gold-199	100
Tungsten-179	1,000	Gold-200m	100
Tungsten-181	1,000	Gold-200	1,000
Tungsten-185	100	Gold-201	1,000
Tungsten-187	100	Mercury-193m	100
Tungsten-188	10	Mercury-193	1,000
Rhenium-177	1,000	Mercury-194	1
Rhenium-178	1,000	Mercury-195m	100
Rhenium-181	1,000	Mercury-195	1,000
Rhenium-182		Mercury-197m	100
(12.7h)	1,000	Mercury-197	1,000
Rhenium-182		Mercury-199m	1,000
(64.0h)	100	Mercury-203	100
Rhenium-184m	10	Thallium-194m	1,000
Rhenium-184	100	Thallium-194	1,000
Rhenium-186m	10	Thallium-195	1,000
Rhenium-186	100	Thallium-197	1,000
Rhenium-187	1,000	Thallium-198m	1,000
Rhenium-188m	1,000	Thallium-198	1,000
Rhenium-188	100	Thallium-199	1,000
Rhenium-189	100	Thallium-201	1,000
Osmium-180	1,000	Thallium-200	1,000
Osmium-181	1,000	Thallium-202	100
Osmium-182	100	Thallium-204	100

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μ Ci)	Radionuclide	Quantity (μ Ci)
Lead-195m	1,000	Uranium-230	0.01
Lead-198	1,000	Uranium-231	100
Lead-199	1,000	Uranium-232	0.001
Lead-200	100	Uranium-233	0.001
Lead-201	1,000	Uranium-234	0.001
Lead-202m	1,000	Uranium-235	0.001
Lead-202	10	Uranium-236	0.001
Lead-203	1,000	Uranium-237	100
Lead-205	100	Uranium-238	100
Lead-209	1,000	Uranium-239	1,000
Lead-210	0.01	Uranium-240	100
Lead-211	100	Uranium-natural	100
Lead-212	1	Neptunium-232	100
Lead-214	100	Neptunium-233	1,000
Bismuth-200	1,000	Neptunium-234	100
Bismuth-201	1,000	Neptunium-235	100
Bismuth-202	1,000	Neptunium-236 (1.15E + 5)	0.001
Bismuth-203	100	Neptunium-236 (22.5h)	1
Bismuth-205	100	Neptunium-237	0.001
Bismuth-206	100	Neptunium-238	10
Bismuth-207	10	Neptunium-239	100
Bismuth-210m	0.1	Neptunium-240	1,000
Bismuth-210	1	Plutonium-234	10
Bismuth-212	10	Plutonium-235	1,000
Bismuth-213	10	Plutonium-236	0.001
Bismuth-214	100	Plutonium-237	100
Polonium-203	1,000	Plutonium-238	0.001
Polonium-205	1,000	Plutonium-239	0.001
Polonium-207	1,000	Plutonium-240	0.001
Polonium-210	0.1	Plutonium-241	0.01
Astatine-207	100	Plutonium-242	0.001
Astatine-211	10	Plutonium-243	1,000
Radon-220	1	Plutonium-244	0.001
Radon-222	1	Plutonium-245	100
Francium-222	100	Americium-237	1,000
Francium-223	100	Americium-238	100
Radium-223	0.1	Americium-239	1,000
Radium-224	0.1	Americium-240	100
Radium-225	0.1	Americium-241	0.001
Radium-226	0.1	Americium-242m	0.001
Radium-227	1,000	Americium-242	10
Radium-228	0.1	Americium-243	0.001
Actinium-224	1	Americium-244m	100
Actinium-225	0.01	Americium-244	10
Actinium-226	0.1	Americium-245	1,000
Actinium-227	0.001	Americium-246m	1,000
Actinium-228	1	Americium-246	1,000
Thorium-226	10	Curium-238	100
Thorium-227	0.01	Curium-240	0.1
Thorium-228	0.001	Curium-241	1
Thorium-229	0.001	Curium-242	0.01
Thorium-230	0.001	Curium-243	0.001
Thorium-231	100	Curium-244	0.001
Thorium-232	100	Curium-245	0.001
Thorium-234	10	Curium-246	0.001
Thorium-natural	100	Curium-247	0.001
Protactinium-227	10	Curium-248	0.001
Protactinium-228	1	Curium-249	1,000
Protactinium-230	0.1	Berkelium-245	100
Protactinium-231	0.001	Berkelium-246	100
Protactinium-232	1	Berkelium-247	0.001
Protactinium-233	100		
Protactinium-234	100		

*To convert μ Ci to kBq, multiply the μ Ci value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Berkelium-249	0.1	Fermium-254	10
Berkelium-250	10	Fermium-255	1
Californium-244	100	Fermium-257	0.01
Californium-246	1	Mendelevium-257	10
Californium-248	0.01	Mendelevium-258	0.01
Californium-249	0.001	Any alpha-emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	0.001
Californium-250	0.001		
Californium-251	0.001		
Californium-252	0.001		
Californium-253	0.1		
Californium-254	0.001		
Einsteinium-250	100		
Einsteinium-251	100	Any radionuclide other than alpha- emitting radionuclides not listed above, or mixtures of beta emitters of unknown composition	0.01
Einsteinium-253	0.1		
Einsteinium-254m	1		
Einsteinium-254	0.01		
Fermium-252	1		
Fermium-253	1		

* To convert μCi to kBq , multiply the μCi value by 37.

NOTE: For purposes of R12-1-428(E), R12-1-432(A), and R12-1-443(A) where there is involved a combination of radionuclides in known amounts, the limit for the combination shall be derived as follows: determine, for each radionuclide in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific radionuclide when not in combination. The sum of such ratios for all radionuclides in the combination may not exceed "1" -- that is, unity.

¹ The quantities listed above were derived by taking 1/10 of the most restrictive ALI listed in Table I, Columns 1 and 2, of Appendix B to Article 4, rounding to the nearest factor of 10, and constraining the values listed between 37 Bq and 37 MBq (0.001 and 1,000 μCi). Values of 3.7 MBq (100 μCi) have been assigned for radionuclides having a radioactive half-life in excess of E+9 years, except rhenium, 37 MBq (1,000 μCi), to take into account their low specific activity.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).

APPENDIX D. CLASSIFICATION AND CHARACTERISTICS OF LOW-LEVEL RADIOACTIVE WASTE

I. Classification of Radioactive Waste for Land Disposal

- a) Considerations. Determination of the classification of radioactive waste involves two considerations. First, consideration must be given to the concentration of long-lived radionuclides (and their shorter-lived precursors) whose potential hazard will persist long after such precautions as institutional controls, improved waste form, and deeper disposal have ceased to be effective. These precautions delay the time when long-lived radio nuclides could cause exposures. In addition, the magnitude of the potential dose is limited by the concentration and availability of the radionuclide at the time of exposure. Second, consideration must be given to the concentration of shorter-lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.

- b) Classes of waste.

- 1) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in Section II(a). If Class A waste also meets the stability requirements set forth in Section II(b), it is not necessary to segregate the waste for disposal.

- 2) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in Section II.
- 3) Class C waste is waste that not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in Section II.
- c) Classification determined by long-lived radionuclides. If the radioactive waste contains only radionuclides listed in Table I, classification shall be determined as follows:
 - 1) If the concentration does not exceed 0.1 times the value in Table I, the waste is Class A.
 - 2) If the concentration exceeds 0.1 times the value in Table I but does not exceed the value in Table I, the waste is Class C.
 - 3) If the concentration exceeds the value in Table I, the waste is not generally acceptable for land disposal.
 - 4) For wastes containing mixtures of radionuclides listed in Table I, the total concentration shall be determined by the sum of fractions rule described in Section I(g).

**TABLE I
Concentration**

Radionuclide	curie/cubic meter ^a	nanocuries/gram ^b
C-14	8	
C-14 in activated metal	80	
Ni-59 in activated metal	220	
Nb-94 in activated metal	0.2	
Tc-99	3	
I-129	0.08	
Alpha-emitting transuranic radionuclides with half-life greater than five years	100	
Pu-241		3,500
Cm-242		20,000
Ra-226		100

^aTo convert the Ci/m³ values to gigabecquerel (GBq) per cubic meter, multiply the Ci/m³ value by 37.

^bTo convert the nCi/g values to becquerel (Bq) per gram, multiply the nCi/g value by 37.

- d) Classification determined by short-lived radionuclides. If the waste does not contain any of the radionuclides listed in Table I, classification shall be determined based on the concentrations shown in Table II. However, as specified in Section I(f), if radioactive waste does not contain any nuclides listed in either Table I or II, it is Class A.
- 1) If the concentration does not exceed the value in Column 1, the waste is Class A.
 - 2) If the concentration exceeds the value in Column 1 but does not exceed the value in Column 2, the waste is Class B.
 - 3) If the concentration exceeds the value in Column 2 but does not exceed the value in Column 3, the waste is Class C.
 - 4) If the concentration exceeds the value in Column 3, the waste is not generally acceptable for near-surface disposal.
 - 5) For wastes containing mixtures of the radionuclides listed in Table II, the total concentration shall be determined by the sum of fractions rule described in Section I(g).

TABLE II

Radionuclide	Concentration, Column 1	curie/cubic meter*	
		Column 2	Column 3
Total of all radionuclides with less than 5-year half-life	700	*	*
H-3	40	*	*
Co-60	700	*	*
Ni-63	3.5	70	700
Ni-63 in activated metal	35	700	7000
Sr-90	0.04	150	7000
Cs-137	1	44	4600

*AGENCY NOTE: To convert the Ci/m³ value to gigabecquerel (GBq) per cubic meter, multiply the Ci/m³ value by 37. There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other radionuclides in Table II determine the waste to be Class C independent of these radionuclides.

- e) Classification determined by both long- and short-lived radionuclides. If the radioactive waste contains a mixture of radionuclides, some of which are listed in Table I and some of which are listed in Table II, classification shall be determined as follows:
- 1) If the concentration of a radionuclide listed in Table I is less than 0.1 times the value listed in Table I, the class shall be that determined by the concentration of radionuclides listed in Table II.
 - 2) If the concentration of a radionuclide listed in Table I exceeds 0.1 times the value listed in Table I, but does not exceed the value in Table II, the waste shall be Class C, provided the concentration of radionuclides listed in Table II does not exceed the value shown in Column 3 of Table II.
 - f) Classification of wastes with radionuclides other than those listed in Tables I and II. If the waste does not contain any radionuclides listed in either Table I or II, it is Class A.
 - g) The sum of the fractions rule for mixtures of radionuclides. For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each radionuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits shall all be taken from the same column of the same table. The sum of the fractions for the column shall be less than 1.0 if the

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waste class is to be determined by that column. Example: A waste contains Sr-90 in a concentration of 1.85 TBq/m³ (50 Ci/m³) and Cs-137 in a concentration of 814 GBq/m³ (22 Ci/m³). Since the concentrations both exceed the values in Column 1, Table II, they shall be compared to Column 2 values. For Sr-90 fraction, 50/150 = 0.33, for Cs-137 fraction, 22/44 = 0.5; the sum of the fractions = 0.83. Since the sum is less than 1.0, the waste is Class B.

- h) Determination of concentrations in wastes. The concentration of a radionuclide may be determined by indirect methods such as use of scaling factors which relate the inferred concentration of one radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurements. The concentration of a radionuclide may be averaged over the volume of the waste, or weight of the waste if the units are expressed as becquerel (nanocurie) per gram.

II. Radioactive Waste Characteristics

- a) The following are minimum requirements for all classes of waste and are intended to facilitate handling and provide protection of health and safety of personnel at the disposal site.
- 1) Wastes shall be packaged in conformance with the conditions of the license issued to the site operator to which the waste will be shipped. Where the conditions of the site license are more restrictive than the provisions of Article 4, the site license conditions shall govern.
 - 2) Wastes shall not be packaged for disposal in cardboard or fiberboard boxes.
 - 3) Liquid waste shall be packaged in sufficient absorbent material to absorb twice the volume of the liquid.
 - 4) Solid waste containing liquid shall contain as little free-standing and non-corrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume.
 - 5) Waste shall not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures, or of explosive reaction with water.
 - 6) Waste shall not contain, or be capable of generating, quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste. This does not apply to radioactive gaseous waste packaged in accordance with Section II(a)(8).

- 7) Waste shall not be pyrophoric. Pyrophoric materials contained in wastes shall be treated, prepared, and packaged to be nonflammable *****

- 8) Wastes in a gaseous form shall be packaged at an absolute pressure that does not exceed 1.5 atmospheres at 20° C. Total activity shall not exceed 3.7 TBq (100 Ci) per container.

- 9) Wastes containing hazardous, biological, pathogenic, or infectious material shall be treated to reduce to the maximum extent practicable the potential hazard from the non-radiological materials.

- b) The following requirements are intended to provide stability of the waste. Stability is intended to ensure that the waste does not degrade and affect overall stability of the site through slumping, collapse, or other failure of the disposal unit and thereby lead to water infiltration. Stability is also a factor in limiting exposure to an inadvertent intruder, since it provides a recognizable and nondispersible waste.

- 1) Waste shall have structural stability. A structurally stable waste form will generally maintain its physical dimensions and its form, under the expected disposal conditions such as weight of overburden and compaction equipment, the presence of moisture, and microbial activity, and internal factors such as radiation effects and chemical changes. Structural stability can be provided by the waste form itself, processing the waste to a stable form, or placing the waste in a disposal container or structure that provides stability after disposal.

- 2) Notwithstanding the provisions in Section II(a)(3) and (4), liquid wastes, or wastes containing liquid, shall be converted into a form that contains as little free-standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume of the waste when the waste is in a disposal container designed to ensure stability, or 0.5% of the volume of the waste for waste processed to a stable form.

- 3) Void spaces within the waste and between the waste and its package shall be reduced to the extent practicable.

III. Labeling

Each package of waste shall be clearly labeled to identify whether it is Class A, Class B, or Class C waste, in accordance with Section I.

*****See (A)(4) of these regulations for definition of pyrophoric.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).

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APPENDIX E. QUANTITIES FOR USE WITH DECOMMISSIONING

Material	Microcurie	Material	Microcurie
Americium-241	0.01	Iodine-134	10
Antimony-122	100	Iodine-135	10
Antimony-124	10	Iridium-192	10
Antimony-125	10	Iridium-194	100
Arsenic-73	100	Iron-55	100
Arsenic-74	10	Iron-59	10
Arsenic-76	10	Krypton-85	100
Arsenic-77	100	Krypton-87	10
Barium-131	10	Lanthanum-140	10
Barium-133	10	Lutetium-177	100
Barium-140	10	Manganese-52	10
Bismuth-210	1	Manganese-54	10
Bromine-82	10	Manganese-56	10
Cadmium-109	10	Mercury-197m	100
Cadmium-115m	10	Mercury-197	100
Cadmium-115	100	Mercury-203	10
Calcium-45	10	Molybdenum-99	100
Calcium-47	10	Neodymium-147	100
Carbon-14	100	Neodymium-149	100
Cerium-141	100	Nickel-59	100
Cerium-143	100	Nickel-63	10
Cerium-144	1	Nickel-65	100
Cesium-131	1,000	Niobium-93m	10
Cesium-134m	100	Niobium-95	10
Cesium-134	1	Niobium-97	10
Cesium-135	10	Osmium-185	10
Cesium-136	10	Osmium-191m	100
Cesium-137	10	Osmium-191	100
Chlorine-36	10	Osmium-193	100
Chlorine-38	10	Palladium-103	100
Chromium-51	1,000	Palladium-109	100
Cobalt-58m	10	Phosphorus-32	10
Cobalt-58	10	Platinum-191	100
Cobalt-60	1	Platinum-193m	100
Copper-64	100	Platinum-193	100
Dysprosium-165	10	Platinum-197m	100
Dysprosium-166	100	Platinum-197	100
Erbium-169	100	Plutonium-239	0.01
Erbium-171	100	Polonium-210	0.1
Europium-152 (9.2 h)	100	Potassium-42	10
Europium-152 (13 yr)	1	Praseodymium-142	100
Europium-154	1	Praseodymium-143	100
Europium-155	10	Promethium-147	10
Fluorine-18	1,000	Promethium-149	10
Gadolinium-153	10	Radium-226	0.01
Gadolinium-159	100	Rhenium-186	100
Gallium-72	10	Rhenium-188	100
Germanium-71	100	Rhodium-103m	100
Gold-198	100	Rhodium-105	100
Gold-199	100	Rubidium-86	10
Hafnium-181	10	Rubidium-87	10
Holmium-166	100	Ruthenium-97	100
Hydrogen-3	1,000	Ruthenium-103	10
Indium-113m	100	Ruthenium-105	10
Indium-114m	10	Ruthenium-106	1
Indium-115m	100	Samarium-151	10
Indium-115	10	Samarium-153	100
Iodine-125	1	Scandium-46	10
Iodine-126	1	Scandium-47	100
Iodine-129	0.1	Scandium-48	10
Iodine-131	1	Selenium-75	10
Iodine-132	10	Silicon-31	100
Iodine-133	1	Silver-105	10

* To convert μCi to kBq , multiply the μCi value by 37.

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Material	Microcurie	Material	Microcurie
Silver-110m	1	Tungsten-181	10
Silver-111	100	Tungsten-185	10
Sodium-22	1	Tungsten-187	100
Sodium-24	10	Uranium (natural)**	100
Strontium-85	10	Uranium-233	0.01
Strontium-89	1	Uranium-234	0.01
Strontium-90	0.1	Uranium-235	0.01
Strontium-91	10	Vanadium-48	10
Strontium-92	10	Xenon-131m	1,000
Sulfur-35	100	Xenon-133	100
Tantalum-182	10	Xenon-135	100
Technetium-96	10	Ytterbium-175	100
Technetium-97m	100	Yttrium-90	10
Technetium-97	100	Yttrium-91	10
Technetium-99m	100	Yttrium-92	100
Technetium-99	10	Yttrium-93	100
Tellurium-125m	10	Zinc-65	10
Tellurium-127m	10	Zinc-69m	100
Tellurium-127	100	Zinc-69	1,000
Tellurium-129m	10	Zirconium-93	10
Tellurium-129	100	Zirconium-95	10
Tellurium-131m	10	Zirconium-97	10
Tellurium-132	10	Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	0.01
Terbium-160	10		
Thallium-200	100	Any radionuclide other than alpha emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition	0.1
Thallium-201	100		
Thallium-202	100		
Thallium-204	10		
Thorium (natural)**	100		
Thulium-170	10		
Thulium-171	10		
Tin-113	10		
Tin-125	10		

*To convert μCi to kBq, multiply the μCi value by 37.

** Based on alpha disintegration rate of Th-232, Th-230 and their daughter products.

*** Based on alpha disintegration rate of U-238, U-234, and U-235.

NOTE: Where there is involved a combination of isotopes in known amounts, the limit for the combination should be derived as follows: Determine, for each isotope in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific isotope when not in combination. The sum of such ratios for all the isotopes in the combination may not exceed "1" - that is, unity.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).

ARRA-6. Repealed

Historical Note

Adopted effective February 25, 1985 (Supp. 85-1). Form repealed, new form adopted in Article 10 effective August 10, 1994 (Supp. 94-3).

ARRA-7. Repealed

Historical Note

Adopted effective February 25, 1985 (Supp. 85-1). Repealed effective August 10, 1994 (Supp. 94-3).

ARRA-8. Repealed

Historical Note

Adopted effective February 25, 1985 (Supp. 85-1). Repealed effective August 10, 1994 (Supp. 94-3).

ARTICLE 5. SEALED SOURCE INDUSTRIAL RADIOGRAPHY

R12-1-501. Definitions

"Access panel" means any panel that is designed to be removed or opened for maintenance or service purposes, opened using tools, and used to provide access to the interior of the cabinet x-ray unit.

"Annual refresher safety training" means a review conducted or provided by the licensee for its employees on radiation safety aspects of industrial radiography. The review shall include, as applicable, the results of internal inspections, new procedures or equipment, new or revised state rules, accidents or errors that have occurred, and provide opportunities for employees to ask safety questions.

"Aperture" means any opening in the outside surface of the cabinet x-ray unit, other than a port, which remains open during generation of x-radiation.

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“Associated equipment” means equipment used in conjunction with a radiographic exposure device that drives, guides, or comes in contact with the source.

“Certifying entity” means an independent certifying organization that complies with the requirements in Appendix A of this Article, or requirements of the NRC or another Agreement State, that are equivalent to the requirements in parts II and III of Appendix A.

“Collimator” means a radiation shield that is placed on the end of the guide tube or directly onto a radiographic exposure device to restrict the size of the radiation beam when the sealed source is positioned to make a radiographic exposure.

“Control (drive) cable” means the cable that is connected to the source assembly and used to drive the source to and from the exposure location.

“Control (drive) mechanism” means a device that enables the source assembly to be moved to and from the exposure device.

“Control tube” means a protective sheath for guiding the control cable. The control tube connects the control drive mechanism to the radiographic exposure device.

“Door” means any barrier that is designed to be movable or opened for routine operation purposes, not opened using tools, and used to provide access to the interior of the cabinet x-ray unit.

“Exposure head” means a device that places the gamma radiography sealed source in a selected working position.

“Ground fault” means an accidental electrical grounding of an electrical conductor.

“Guide tube (projection sheath)” means a flexible or rigid tube (i.e., “J” tube) for guiding the source assembly and the attached control cable from the exposure device to the exposure head. The guide tube may also include the connections necessary for attachment to the exposure device and to the exposure head.

“Hands-on experience” means accumulation of knowledge or skill in any area relevant to radiography.

“Independent certifying organization” means an independent organization that meets all of the requirements in Appendix A.

“Lay-barge radiography” means industrial radiography performed on any water vessel used for laying pipe.

“Port” means any opening in the outside surface of the cabinet x-ray unit that is designed to remain open, during generation of x-rays, for conveying material being irradiated into and out of the cabinet, or for partial insertion of an object for irradiation whose dimensions do not permit complete insertion into the cabinet x-ray unit.

“Practical examination” means a demonstration, through practical application of safety rules and principles of industrial radiography, including use of all radiography equipment and knowledge of radiography procedures.

“Radiographer certification” means written approval received from a certifying entity stating that an individual has satisfactorily met certain established radiation safety, testing, and experience criteria.

“Radiographic exposure device” means any x-ray machine used for purposes of making an industrial radiographic exposure or a device that contains a sealed source, and the sealed source or its shielding may be moved or otherwise changed from a shielded to an unshielded position for purposes of making an industrial radiographic exposure.

“Radiographic operations” means all activities associated with the presence of radiation sources in a radiographic exposure device during use of the device or transport (except when the device is being transported by a common or contract carrier). This includes performing surveys to confirm the adequacy of boundaries, setting up equipment, and conducting any activity inside restricted area boundaries.

“S-tube” means a tube through which a radioactive source travels when the source is inside a radiographic exposure device.

“Source assembly” means an assembly that consists of a sealed source and a connector that attaches the source to a control cable. The source assembly may also include a stop ball used to secure the source in the shielded position.

“Underwater radiography” means industrial radiography performed when a radiographic exposure device is beneath the surface of water.

Historical Note

Former Rule Section E.1; Former Section R12-1-501 repealed, new Section R12-1-501 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-501 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-502. License Requirements

- A. The Agency shall review an application for a specific license for the use of radioactive material in industrial radiography and approve the license if an applicant meets all of the following requirements:
1. The applicant satisfies the general requirements in R12-1-309 and any special requirements contained in this Article; and
 2. The applicant submits a program for training radiographers and radiographers’ assistants that complies with R12-1-543, except that:
 - a. After the effective date of this Section, an applicant is not required to describe its initial training and examination program for radiographers;
 - b. An applicant shall affirm that an individual who is acting as an industrial radiographer is certified in radiation safety by a certifying organization, as required in R12-1-543, before permitting the individual to act as a radiographer. This affirmation substitutes for a description of the applicant’s initial training and examination program for radiographers in the subjects outlined in R12-1-543(G); and
 - c. An applicant shall submit procedures for verifying and documenting the certification status of each radiographer and for ensuring that the certification remains valid.
- B. The applicant shall submit written operating and emergency procedures as prescribed in R12-1-522.
- C. The applicant shall submit a description of a program for review of job performance of each radiographer and radiographers’ assistant at intervals that do not exceed six months as prescribed in R12-1-543(E).
- D. The applicant shall submit a description of the applicant’s overall organizational structure as it applies to radiation safety

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responsibilities in industrial radiography, including specified delegation of authority and responsibility.

- E. The applicant shall submit a list of the qualifications of each individual designated as an RSO under R12-1-512 and indicate which designee is responsible for ensuring that the licensee's radiation safety program is implemented in accordance with approved procedures.
- F. If an applicant intends to perform leak testing on any sealed source or exposure device that contains depleted uranium (DU) shielding, the applicant shall submit a description of the procedures for performing the leak testing and the qualifications of each person authorized to perform leak testing. If the applicant intends to analyze its own wipe samples, the application shall include a description of the procedures to be followed. The description shall include the:
 1. Instruments to be used,
 2. Methods of performing the analysis, and
 3. Relevant experience of the person who will analyze the wipe samples.
- G. If the applicant intends to perform "in-house" calibrations of survey instruments, the applicant shall describe each calibration method to be used and the relevant experience of each person who will perform a calibration. A licensee shall perform all calibrations according to the procedures prescribed in R12-1-504.
- H. The applicant shall identify and describe the location of all field stations and permanent radiographic installations.
- I. The applicant shall identify each location where records required by this Chapter will be maintained.

Historical Note

Former Rule Section E.2; Former Section R12-1-502 repealed, new Section R12-1-502 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-502 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-503. Performance Requirements for Equipment

- A. A licensee shall ensure that equipment used in industrial radiographic operations meets the following minimum criteria:
 1. Each radiographic exposure device, source assembly or sealed source, and all associated equipment meet the requirements in American National Standards Institute, N432-1980 "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography" (published as NBS Handbook 136, issued January 1981) by the American National Standards Institute, which is incorporated by reference and on file with the Agency. This incorporation by reference contains no future editions or amendments. This publication may be purchased from the American National Standards Institute, Inc., 25 West 43rd Street, New York, New York 10036 Telephone (212) 642-4900. A copy of the document is also on file at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html; or
 2. An engineering safety analysis demonstrates the applicability of previously performed testing on similar individual radiography equipment components. Based on a review of the analysis, the Agency may find that previ-

ously performed testing can be substituted for testing of the component under the standards in subsection (A)(1).

- B. In addition to the requirements in subsection (A), the following requirements apply to each radiographic exposure device, source changer, source assembly, and sealed source:
 1. A licensee shall ensure that each radiographic exposure device has attached to it a durable, legible, and clearly visible label bearing:
 - a. The chemical symbol and mass number of the radionuclide in the device;
 - b. The activity of the source and the date on which this activity was last measured;
 - c. The model (or product code) and serial number of the sealed source;
 - d. The manufacturer's description of the sealed source; and
 - e. The licensee's name, address, and telephone number.
 2. A licensee shall ensure that each radiographic exposure device intended for use as a Type B transport container meets the applicable requirements of 10 CFR 71, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 3. A licensee shall not modify any radiographic exposure device, source changer, source assembly, or associated equipment, unless the design of the replacement component, including source holder, source assembly, controls, or guide tubes is consistent with and does not compromise the design safety features of the system.
- C. In addition to the requirements in subsections (A) and (B), the following requirements apply to each radiographic exposure device, source assembly, and associated equipment that allows the source to be moved out of the device for radiographic operations or to a source changer:
 1. The license shall ensure that the coupling between the source assembly and the control cable is designed so that the source assembly does not become disconnected if it is positioned outside of the guide tube and is constructed so that an unintentional disconnect will not occur under normal and reasonably foreseeable abnormal conditions;
 2. The device automatically secures the source assembly if it is retracted into the fully shielded position within the device and the securing system is released from the exposure device only by means of a deliberate operation;
 3. The outlet fittings, lock box, and drive cable fittings on each radiographic exposure device are equipped with safety plugs or covers installed for storage and transportation to protect the source assembly from water, mud, sand, or other foreign matter;
 4. Each sealed source or source assembly has attached to it or is engraved with a durable, legible, and visible label with the words: "DANGER--RADIOACTIVE." The licensee shall ensure that the label does not interfere with safe operation of the equipment;
 5. The guide tube is able to withstand a crushing test that closely approximates the crushing forces that are likely to be encountered during use, and a kinking resistance test that closely approximates the kinking forces that are likely to be encountered during use;
 6. A guide tube is used if a person moves the source out of the device;
 7. An exposure head or similar device, designed to prevent the source assembly from passing out of the end of the guide tube, is attached to the outermost end of the guide tube during industrial radiography operations;

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8. The guide tube exposure head connection is able to withstand the tensile test for control units specified in ANSI N432-1980, incorporated by reference in subsection (A); and
 9. Source changers provide a system for ensuring that the source is not accidentally withdrawn from the changer when a person is connecting or disconnecting the drive cable to or from the source assembly.
- D.** A licensee shall ensure that radiographic exposure devices and associated equipment in use after January 10, 1996 comply with the requirements of this Section.
- E.** Notwithstanding subsection (A), a licensee with equipment used in industrial radiographic operations need not comply with Sec. 8.92(C) of the Endurance Test in American National Standards Institute N432-1980 if the prototype equipment has been tested using a torque value representative of the torque that an individual using the radiography equipment can realistically exert on the lever or crankshaft of the drive mechanism.

Historical Note

Former Rule Section E.3; Former Section R12-1-503 repealed, new Section R12-1-503 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-503 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-504. Radiation Survey Instruments

- A.** A licensee shall maintain at least two calibrated and operable radiation survey instruments at each location where sources of radiation are present to make radiation surveys required by this Article and Article 4 of this Chapter. Instrumentation required by this Section shall be capable of measuring a range from 0.02 millisieverts (2 millirems) per hour through 0.01 sievert (1 rem) per hour.
- B.** A licensee shall ensure that each radiation survey instrument required under subsection (A) is calibrated:
1. At intervals that do not exceed six months, and after instrument servicing, except for battery changes;
 2. For linear scale instruments, at two points located approximately one-third and two-thirds of full-scale on each scale; for logarithmic scale instruments, at mid-range of each decade, and at two points of at least one decade; and for digital instruments, at 3 points between 0.02 and 10 millisieverts (2 and 1000 millirems) per hour; and
 3. So that an accuracy within plus or minus 20% of the calibration source can be demonstrated at each point checked.
- C.** A licensee shall maintain calibration records for each radiation survey instrument, and maintain each record for three years after it is made.

Historical Note

Former Rule Section E.4; Former Section R12-1-504 repealed, new Section R12-1-504 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-504 repealed, new Section R12-1-504 adopted effective December 20, 1985 (Supp. 85-6). Former Section R12-1-504 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-505. Leak Testing and Replacement of Sealed Sources

- A.** A licensee shall ensure that replacement of any sealed source fastened to or contained in a radiographic exposure device and leak testing of any sealed source is performed by a person authorized to do so by the Agency, NRC, or another Agreement State.
- B.** A licensee shall ensure that opening, repairing, or modifying any sealed source is performed by a person specifically authorized to do so by the Agency, NRC, or another Agreement State.
- C.** A licensee that uses a sealed source shall have the source tested for leakage by a qualified person at intervals that do not exceed six months. The person who performs leak testing of the source shall use a method approved by the Agency, NRC, or by another Agreement State. A wipe sample shall be taken from the nearest accessible point to the sealed source where contamination might accumulate. The wipe sample shall be analyzed for radioactive contamination. The licensee shall ensure that the analysis is capable of detecting the presence of 185 Bq (0.005 microcurie) of radioactive material on the test sample and a person specifically authorized by the Agency, NRC, or another Agreement State performs the analysis. The licensee shall maintain records of the leak tests in accordance with this Section.
- D.** Unless a sealed source is accompanied by a certificate from the transferor that shows that the sealed source has been leak tested within six months before the transfer, a licensee shall not use the sealed source until it is tested for leakage. A licensee is not required to test a sealed source that is in storage, but shall test each sealed source before use or transfer to another person if the interval of storage exceeds six months.
- E.** A licensee shall immediately withdraw equipment containing a leaking source from use and have it decontaminated and repaired or dispose of the source in accordance with this Chapter. The licensee shall file a report with the Director of the Agency within five days of any test with results that exceed the threshold in this subsection, and describe the equipment involved, the test results, and corrective action taken. If a leak test conducted under this Section reveals the presence of 185 Bq (0.005 microcurie) or more of removable radioactive material the Agency classifies the sealed source as leaking.
- F.** A licensee shall test for DU contamination at intervals that do not to exceed 12 months a radiographic exposure device that uses depleted uranium (DU) shielding and an "S" tube configuration. The licensee shall ensure that the analysis is capable of detecting the presence of 185 Bq (0.005 microcuries) of radioactive material on the test sample and a person specifically authorized by the Agency, NRC, or another Agreement State performs the analysis. If the testing reveals the presence of 185 Bq (0.005 microcuries) or more of removable DU contamination, the licensee shall remove the exposure device from use until an evaluation of the wear on the S-tube is completed. If the evaluation reveals that the S-tube is worn through, the licensee shall ensure that the device is not used again. The licensee is not required to test for DU contamination if the radiographic exposure device is in storage. Before using or transferring the radiographic exposure device, the licensee shall test the device for DU contamination if the interval of storage exceeds 12 months. The licensee shall maintain records of the DU leak test in accordance with subsection (G).
- G.** A licensee shall maintain records of leak test results for each sealed source and for each device that contains DU. The licensee shall ensure results are in Becquerels (microcuries), and retain each record for three years after it is made or until the source is removed from storage and tested, whichever is longer.

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Historical Note

Former Rule Section E.5; Former Section R12-1-505 repealed, new Section R12-1-505 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-505 repealed, new Section R12-1-505 adopted effective December 20, 1985 (Supp. 85-6). Amended subsections (A), (F) and (G) effective May 2, 1988 (Supp. 88-2). Former Section R12-1-505 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-506. Quarterly Inventory

- A. A licensee shall conduct a quarterly physical inventory to account for all sealed sources and devices that contain depleted uranium.
- B. A licensee shall maintain a record of the quarterly inventory required under subsection (A) for three years after it is made.
- C. The record required in subsection (B) shall include the date of the inventory, name of the individual who conducted the inventory, radionuclide, number of becquerels (curies) or mass (for DU) in each device, location of sealed source and associated devices, and manufacturer, model, and serial number of each sealed source and device as applicable.

Historical Note

Former Rule Section E.6; Former Section R12-1-506 repealed, new Section R12-1-506 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-506 repealed, new Section R12-1-506 adopted effective December 20, 1985 (Supp. 85-6). Amended subsection (A) effective May 2, 1988 (Supp. 88-2). Former Section R12-1-506 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-507. Utilization Logs

- A. A licensee shall maintain for each sealed source a utilization log that provides all of the following information:
 1. A description, including the make, model, and serial number of each radiographic exposure device, and each sealed source transport and storage container that contains a sealed source;
 2. The identity and signature of the radiographer using the source; and
 3. The plant or site where the source is used and dates of use, including the date each source is removed from and returned to storage.
- B. A licensee shall retain the log required by subsection (A) for three years after the log is made.

Historical Note

Former Section R12-1-507 repealed effective December 20, 1985 (Supp. 85-6). New Section adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-508. Inspection and Maintenance of Radiographic Exposure Devices, Transport and Storage Containers, Source Changers, Survey Instruments, and Associated Equipment

- A. A licensee shall perform visual and operability checks on each survey instrument, radiographic exposure device, transport and storage container, source changer, and associated equip-

ment before use on each day the equipment is to be used to ensure that the equipment is in good working condition, the source is adequately shielded, and required labeling is present. A survey instrument operability check shall be performed using a check source or other authorized means. If an equipment problem is found, the licensee shall remove the equipment from service until it is repaired.

- B. A licensee shall have written inspection and maintenance procedures to ensure that:
 1. Radiographic exposure devices, source changers, transport and storage containers, survey instruments, and associated equipment that require inspection and maintenance at intervals that do not exceed three months or before first use of the equipment are functioning properly and safely. Replacement components shall meet design specifications. If an equipment problem is discovered, the licensee shall remove the equipment from service until it is repaired; and
 2. Type B packages are shipped and maintained in accordance with the certificate of compliance or other approval.
- C. A licensee shall maintain records of daily checks and quarterly inspections of radiographic exposure devices, transport and storage containers, source changers, survey instruments, and associated equipment, and retain each record for three years after it is made. The record shall include the date of the check or inspection, name of the inspector, equipment involved, any problems found, and any repair or needed maintenance performed.

Historical Note

Former Section R12-1-508 repealed effective December 20, 1985 (Supp. 85-6). New Section adopted effective April 2, 1990 (Supp. 90-2). Heading amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-509. Surveillance

During each radiographic operation, a radiographer or the radiographer's assistant, as permitted by R12-1-510, shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, except at permanent radiographic installations where all entrances are locked and the licensee is in compliance with R12-1-539.

Historical Note

Former Section R12-1-509 repealed effective December 20, 1985 (Supp. 85-6). New Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-510. Radiographic Operations

- A. If industrial radiography is performed at a location other than a permanent radiographic installation, a licensee shall ensure that the radiographer is accompanied by at least one other radiographer or radiographer's assistant, qualified under R12-1-543. The additional radiographer or radiographer's assistant shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. Industrial radiography is prohibited if only one qualified individual is present.
- B. A licensee shall ensure that each industrial radiographic operation is conducted at a location of use authorized on the license

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in a permanent radiographic installation, unless another permanent location is specifically authorized by the Agency.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed;
new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-511. Repealed**Historical Note**

Repealed effective December 20, 1985 (Supp. 85-6).
New Section adopted effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-512. Radiation Safety Officer (RSO)

- A.** A licensee shall have a radiation safety officer (RSO) who is responsible for implementing procedures and regulatory requirements in the daily operation of the radiation safety program.
- B.** Except as provided in subsection (C), the licensee shall ensure that the RSO satisfies the following minimum requirements:
1. The training and testing requirements in R12-1-543,
 2. Two thousand hours of hands-on experience as a qualified radiographer for an industrial radiographic operation, and
 3. Formal training in the establishment and maintenance of a radiation safety program.
- C.** If the licensee uses an individual in the position of RSO who does not have the training and experience required in subsection (B), the licensee shall provide the Agency with a description of the individual's training and experience in the field of ionizing radiation and training with respect to the establishment and maintenance of a radiation safety protection program so the Agency can determine whether the individual is qualified to perform under subsection (D).
- D.** The specific duties and authorities of the RSO include, but are not limited to:
1. Establishing and overseeing operating, emergency, and ALARA procedures as required in Article 4 of this Chapter and reviewing them every year to ensure that the procedures in use conform to current Agency rules and license conditions;
 2. Overseeing and approving all phases of the training program for radiographic personnel, ensuring that appropriate and effective radiation protection practices are taught;
 3. Overseeing radiation surveys, leak tests, and associated documentation to ensure that the surveys and tests are performed in accordance with the rules and taking corrective measures if levels of radiation exceed established action limits;
 4. Overseeing the personnel monitoring program to ensure that devices are calibrated and used properly by occupationally exposed personnel and ensuring that records are kept of the monitoring results and timely notifications are made as required in R12-1-444; and
 5. Overseeing operations to ensure that they are conducted safely and instituting corrective actions, which may include ceasing operations if necessary.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed;
new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-513. Form of Records

A licensee shall maintain records in accordance with R12-1-405.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-514. Limits on External Radiation Levels from Storage Containers and Source Changers

The maximum rate limits for storage containers and source changers are 2 millisieverts (200 mRem/hr) at any exterior surface and 0.1 millisieverts (10 mRem/hr) at 1 meter from any exterior surface with the sealed source in the shielded position.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-515. Locking Radiographic Exposure Devices, Storage Containers, and Source Changers

- A.** Except at permanent radiographic installations governed by R12-1-539, a licensee shall ensure that each radiographic exposure device has a lock or an outer container with a lock designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The licensee shall ensure that the exposure device or its container, if applicable, is locked (and if a keyed lock, with the key removed) if the device or container is not under the direct surveillance of a radiographer or a radiographer's assistant. During radiographic operations, the radiographer or radiographer's assistant shall secure the sealed source assembly in the shielded position each time the source is returned to the shielded position.
- B.** A licensee shall ensure that each sealed source storage container and source changer has a lock or an outer container with a lock designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The licensee shall ensure that each storage container and source changer is locked (and if a keyed lock, with the key removed) if the storage container or source changer contains a sealed source and is not under the direct surveillance of a radiographer or a radiographer's assistant.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-516. Records of Receipt and Transfer of Sealed Sources

- A.** A licensee shall maintain records that show each receipt and transfer of a sealed source or device that uses DU for shielding and retain each record for three years after it is made.
- B.** The records shall contain separate entries for each transaction, including the date, name of the individual making the record, radionuclide, number of Becquerels (curies) or mass (for DU), and manufacturer, model, and serial number of each sealed source or device, as applicable.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

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R12-1-517. Posting

A licensee shall post any area in which industrial radiography is performed as required by R12-1-429. Exceptions listed in R12-1-430 do not apply to industrial radiographic operations.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-518. Labeling, Storage, and Transportation

- A.** A licensee shall not use a source changer or a storage container to store licensed material unless the source changer or the storage container has securely attached to it a durable, legible, and clearly visible label that bears the standard trefoil radiation caution symbol and the standard colors for the symbol specifically: magenta, purple, or black on a yellow background, and the label has a minimum diameter of 25 mm and the wording "CAUTION (or DANGER), RADIOACTIVE MATERIAL NOTIFY CIVIL AUTHORITIES (or "NAME OF COMPANY")"
- B.** A licensee shall not transport licensed material unless the material is packaged and the package is labeled, marked, and accompanied with appropriate shipping papers in accordance with 10 CFR 71, January 1, 2004, published by the Office of the Federal Register, National Archives and Records Administration, incorporated by reference, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- C.** A licensee shall physically secure locked radiographic exposure devices and storage containers behind a locked door to prevent tampering or removal by unauthorized personnel. The licensee shall store licensed material in a manner that will minimize danger from explosion or fire.
- D.** A licensee shall lock each transport package that contains licensed material and physically secure the package behind the locked doors of the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal of the licensed material from the vehicle.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-519. Repealed**Historical Note**

Repealed effective December 20, 1985 (Supp. 85-6).

R12-1-520. Repealed**Historical Note**

Repealed effective December 20, 1985 (Supp. 85-6).

R12-1-521. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-522. Operating and Emergency Procedures

- A.** A licensee shall ensure that the operating and emergency procedures include, at a minimum, instructions in the following, as applicable:

1. Handling and use of sealed sources or radiographic exposure devices, so that persons are not exposed to radiation that exceeds the limits in Article 4 of this Chapter;
 2. Methods and occasions for conducting radiation surveys;
 3. Methods for controlling access to radiographic areas;
 4. Methods and occasions for locking and securing radiographic exposure devices, transport and storage containers, and sealed sources;
 5. Personnel monitoring and associated equipment;
 6. Transportation of sealed sources to field locations, including packing radiographic exposure devices and storage containers in vehicles, placarding vehicles, and maintaining control of the sealed sources during transportation, as required in 49 CFR 171-173, 2002 edition, published October 1, 2002, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference and on file with the Agency. This incorporation contains no future editions or amendments;
 7. Inspection, maintenance, and operability checks of radiographic exposure devices, survey instruments, transport containers, and storage containers;
 8. Actions to be taken immediately by radiography personnel if a pocket dosimeter is found to be off-scale or an alarm rate meter sounds an alarm;
 9. Procedures for identifying and reporting defects and non-compliance, as required by R12-1-448 and R12-1-535;
 10. Procedures for notifying the RSO and the Agency in the event of an accident;
 11. Methods for minimizing exposure of persons in the event of an accident;
 12. Procedures for recovering a source if the licensee is responsible for source recovery; and
 13. Maintenance of records.
- B.** The licensee shall maintain copies of current operating and emergency procedures until the Agency terminates the license. Superseded procedures shall be maintained for three years after being superceded. Additionally, a copy of the procedures shall be maintained at field stations in accordance with R12-1-540.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-523. Personnel Monitoring

- A.** A licensee shall not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm rate meter, and a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. At permanent radiography installations where other appropriate alarming or warning devices are in routine use, the wearing of an alarm rate meter is not required. A licensee shall:
1. Use a pocket dosimeter with a range from zero to 2 millisieverts (200 millirem). The licensee shall ensure that each dosimeter is recharged at the start of each shift. Electronic personal dosimeters are permitted in place of ion-chamber pocket dosimeters.
 2. Assign a personnel dosimeter to each individual, who shall wear the assigned equipment.
 3. Replace film badges at least monthly and ensure that other personnel dosimeters are processed and evaluated

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by an accredited NVLAP processor and replaced at periods that do not exceed three months.

4. After replacement, ensure that each personnel dosimeter is processed as soon as possible.
- B.** A licensee shall record exposures noted from direct reading dosimeters, such as pocket dosimeters or electronic personal dosimeters, at the beginning and end of each shift. The licensee shall maintain the records for three years after the Agency terminates the license.
- C.** A licensee shall check pocket dosimeters and electronic personal dosimeters for correct response to radiation at periods that do not exceed 12 months. The licensee shall record the results of each check and maintain the records for three years after the dosimeter check is performed. The licensee shall discontinue use of a dosimeter if it is not accurate within plus or minus 20 percent of the true radiation exposure.
- D.** If an individual's pocket dosimeter has an off-scale reading, or the individual's electronic personal dosimeter reads greater than 2 millisieverts (200 millirems), and radiation exposure cannot be ruled out as the cause, a licensee shall process the individual's dosimeter within 24 hours of the suspect exposure. The licensee shall not allow the individual to resume work associated with sources of radiation until the individual's radiation exposure has been determined. Using information from the dosimeter, the licensee's RSO or the RSO's designee shall calculate the affected individual's cumulative radiation exposure as prescribed in Article 4 of this Chapter and include the results of this determination in the personnel monitoring records maintained in accordance with subsection (B).
- E.** If the personnel dosimeter that is required by subsection (A) is lost or damaged, the licensee shall ensure that the worker ceases work immediately until the licensee provides a replacement personnel dosimeter that meets the requirements in subsection (A) and the RSO or the RSO's designee calculates the exposure for the time period from issuance to discovery of the lost or damaged personnel dosimeter. The licensee shall maintain a record of the calculated exposure and the time period for which the personnel dosimeter was lost or damaged in accordance with subsection (B).
- F.** The licensee shall maintain dosimetry reports received from the accredited NVLAP personnel dosimeter processor in accordance with subsection (B).
- G.** For each alarm rate meter a licensee shall ensure that:
 1. At the start of each shift, the alarm functions (sounds) properly before an individual uses the device;
 2. Each device is set to give an alarm signal at a preset dose rate of 5 mSv/hr (500 mrem/hr); with an accuracy of plus or minus 20 percent of the true radiation dose rate;
 3. A special means is necessary to change the preset alarm function on the device; and
 4. Each device is calibrated at periods that do not exceed 12 months for correct response to radiation. The licensee shall maintain records of alarm rate meter calibrations in accordance with subsection (B).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-524. Supervision of a Radiographer's Assistant

If a radiographer's assistant uses a radiographic exposure device, associated equipment, or a sealed source or conducts a radiation

survey required by R12-1-533(B) to determine that the sealed source has returned to the shielded position after an exposure, the licensee shall ensure that the assistant is under the personal supervision of a radiographer. For purposes of this Section "personal supervision" means:

1. The radiographer is physically present at the site where the sealed source is being used,
2. The radiographer is available to give immediate assistance if required, and
3. The radiographer is able to observe the assistant's performance directly.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-525. Notification of Field Work

Each day radioactive material is used for industrial radiography, a licensee shall notify the Agency of any planned field radiography. The notice shall be in writing and specify the location of the field work, the name of the supervising individual at the job site, and the expected duration of the work at the job site listed in the notice. A facsimile that provides the required information is sufficient notice.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-526. Reserved**R12-1-527. Reserved****R12-1-528. Reserved****R12-1-529. Reserved****R12-1-530. Reserved****R12-1-531. Security**

During each radiographic operation, the radiographer or radiographer's assistant shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in Article 1, unless:

1. The high radiation area is equipped with a control device or an alarm system as prescribed in R12-1-420(A), or
2. The high radiation area is locked to protect against unauthorized or accidental entry.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-532. Posting

Notwithstanding any provisions in R12-1-430, areas in which radiography is being performed shall be conspicuously posted as required by R12-1-429(A) and (B).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3).

R12-1-533. Radiation Surveys

- A.** A licensee shall conduct surveys with a calibrated and operable radiation survey instrument that meets the requirements of R12-1-504.
- B.** Using a survey instrument that complies with subsection (A), the licensee shall conduct a survey of the radiographic exposure device and the guide tube after each exposure before approaching the device or the guide tube. The survey shall be performed to determine that the sealed source is in the shielded

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position before the radiographer or radiographer's assistant exchanges films, repositions the exposure head, or dismantles the equipment.

- C. The licensee shall conduct a survey of the radiographic exposure device with a calibrated radiation survey instrument any time the source is exchanged or the device is placed in a storage area, as defined in R12-1-102, to ensure that the sealed source is in the shielded position.
- D. The licensee shall maintain a record of each exposure device survey conducted before the device is placed in storage under subsection (C), if that survey is the last one performed during the workday. Each record shall be maintained for three years after the record is made.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-534. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-535. Notifications

- A. In addition to the reporting requirements specified in Article 4, each licensee shall provide a written report to the Agency if any of the following incidents involving radiography equipment occur:
 1. Unintentional disconnection of the source assembly from the control cable;
 2. Inability to retract the source assembly to the fully shielded position or secure it in this position; or
 3. Failure of any component (critical to safe operation of the device) to properly perform its intended function;
- B. A licensee shall include the following information in any report submitted under this Section, regarding radiography equipment, or Article 4, regarding an overexposure, if the report concerns the failure of safety components of radiography equipment:
 1. A description of the equipment problem;
 2. Cause of the incident, if known;
 3. Name of manufacturer and model number of the equipment involved in the incident;
 4. Place, date, and time of the incident;
 5. Actions taken to establish normal operations;
 6. Corrective actions taken or planned to prevent recurrence; and
 7. Qualifications of personnel involved in the incident.
- C. Any licensee that conducts radiographic operations, or stores radioactive material at a location not listed on the license or for a period longer than 180 days during a calendar year, shall notify the Agency of these activities before the 180 days has elapsed.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-536. Reserved

R12-1-537. Reserved

R12-1-538. Reserved

R12-1-539. Permanent Radiographic Installations

- A. If a licensee maintains a permanent radiographic installation that does not fall within the definition of "enclosed radiography" in R12-1-102, the licensee shall ensure that each entrance, used for personnel access to the high radiation area, has either:
 1. An entrance control device of the type described in R12-1-420(A)(1) that reduces the radiation level upon entry into the area, or
 2. Both conspicuous visible and audible alarm signals to warn of the presence of radiation. The licensee shall ensure that the visible signal is actuated by radiation if a source is exposed and the audible signal is actuated if someone attempts to enter the installation while a source is exposed.
- B. A licensee with an alarm signal shall test the alarm signal for proper operation with a radiation source each day before the installation is used for radiographic operations. The test shall include a check of both the visible and audible signals. A licensee with an entrance control device shall test the device monthly. If an entrance control device or alarm signal is operating improperly, the licensee shall immediately label the device or signal as "defective" and repair the device or signal within seven calendar days. The licensee may continue to use the facility during this seven-day period, if the licensee implements continuous surveillance requirements of R12-1-509 and uses an alarming rate meter.
- C. A licensee shall maintain each record an alarm system or entrance control device test for three years after the record is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-540. Location of Documents and Records

- A. A licensee shall maintain a copy of each record required by this Article and other applicable Articles of this Chapter at a location specified under R12-1-502(I).
- B. A licensee shall maintain a copy of each record listed below at each field station and temporary job site:
 1. The license that authorizes use of radioactive material;
 2. A copy of Articles 4, 5, and 10 of this Chapter;
 3. Utilization logs for each radiographic exposure device dispatched from that location, as required by R12-1-507;
 4. Records of equipment problems identified in daily checks of equipment, as required by R12-1-508(A);
 5. Records of alarm system and entrance control checks as required by R12-1-539;
 6. Records of direct-reading dosimeters, such as pocket dosimeters and electronic personnel dosimeters as required by R12-1-523;
 7. Operating and emergency procedures as required by R12-1-522;
 8. A report on the most recent calibration of the radiation survey instruments in use at the site as required by R12-1-504;
 9. A report on the most recent calibration of each alarm rate meter, and operability check of each pocket dosimeter and electronic personnel dosimeter as required in R12-1-523;
 10. Most recent survey record as required by R12-1-533;

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11. The shipping papers for the transportation of radioactive material required by 10 CFR 71.5, 2003 edition, published January 1, 2003, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference and on file with the Agency (this incorporation contains no future editions or amendments); and
12. If operating under reciprocity in accordance with R12-1-320, a copy of the NRC or Agreement State license authorizing the use of radioactive materials.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-541. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1).

R12-1-542. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective August 10, 1994 (Supp. 94-3). New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1).

Appendix A. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Repealed effective April 2, 1990 (Supp. 90-2).

R12-1-543. Training

- A. A licensee shall not allow an individual to act as a radiographer until the individual has received training in the subjects in subsection (G), has participated in a minimum of two months of on-the-job training, and is certified through a radiographer certification program by a independent certifying organization in accordance with the criteria specified in Appendix A.
 1. A licensee shall provide the Agency with proof of an individual's certification and a written request that the individual be added to a license as a certified radiographer.
 2. A licensee shall maintain proof of certification at the job site where a radiographer is performing field radiography.
 3. A licensee that employs certified radiographers in Arizona shall ensure that:
 - a. Each radiographer has obtained initial certification within the last five years, and
 - b. An uncertified radiographer works only as a radiographer's assistant until certified.
 4. A radiographer shall recertify every five years by:
 - a. Taking an approved radiography certification examination in accordance with this subsection; or
 - b. Providing written evidence that the radiographer is active in the practice of industrial radiography and has participated in continuing education during the previous five-year period.
5. If an individual cannot provide the written evidence required in subsection (4)(b), the individual shall retake the certification examination.
6. A radiographer shall provide the licensee with proof of certification in the form of a card issued by the certifying organization that contains:
 - a. A picture of the certified radiographer,
 - b. The radiographer's certification number,
 - c. The date the certification expires, and
 - d. The radiographer's signature.
- B. A licensee shall not allow an individual to act as a radiographer until the individual:
 1. Has received copies of and instruction in the requirements of this Article; applicable Sections of Articles 4 and 10 and R12-1-107; applicable DOT regulations in 10 CFR 71, January 1, 2003 edition, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference, contains no future editions or amendments, and is on file with Agency; the Agency license or licenses under which the radiographer will perform industrial radiography; and the licensee's operating and emergency procedures;
 2. Has demonstrated an understanding of the licensee's license and operating and emergency procedures by successfully completing a written or oral examination that covers the relevant material;
 3. Has received training in:
 - a. Use of the licensee's radiographic exposure devices and sealed sources,
 - b. Daily inspection of devices and associated equipment, and
 - c. Use of radiation survey instruments; and
 4. Has demonstrated an understanding of the use of radiographic exposure devices, sources, survey instruments, and associated equipment described in subsection (B)(3) by successfully completing a practical examination covering this material.
- C. A licensee shall not allow an individual to act as a radiographer's assistant until the individual:
 1. Has received copies of and instruction in the requirements of this Article; applicable Sections of Articles 4 and 10 and R12-1-107; applicable DOT regulations in 10 CFR 71, January 1, 2003 edition, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference, contains no future editions or amendments, and is on file with Agency; the Agency license or licenses under which the radiographer's assistant will perform industrial radiography; and the licensee's operating and emergency procedures;
 2. Has developed competence to use, under the personal supervision of the radiographer, the licensee's radiographic exposure devices, sealed sources, associated equipment, and radiation survey instruments; and
 3. Has demonstrated understanding of the instructions provided under subsection (C)(1) by successfully completing a written test on the subjects covered and has demonstrated competence using the hardware described in subsection (C)(2) by successfully completing a practical examination.
- D. A licensee shall provide refresher safety training for each radiographer and radiographer's assistant at intervals not to exceed 12 months.

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E. Unless an individual serves as both a radiographer and an RSO, the RSO or the RSO's designee shall design and implement an inspection program to examine the job performance of each radiographer and radiographer's assistant and to ensure that the Agency's rules and license requirements, and the licensee's operating and emergency procedures are followed. The inspection program shall:

1. Include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation, at intervals that do not exceed six months; and
2. If a radiographer or a radiographer's assistant has not participated in an industrial radiographic operation for more than six months, the radiographer shall demonstrate knowledge of the training requirements in subsection (B)(3) and the radiographer's assistant shall demonstrate knowledge of the training requirements of subsection (C)(2) by a practical examination before participating in a radiographic operation.

F. A licensee shall maintain records of the training required in this Section including certification documents, written and practical examinations, refresher safety training documents, and inspection documents, in accordance with subsection (I).

G. A licensee shall include the following subjects in the training required under subsection (A):

1. Fundamentals of radiation safety, including:
 - a. Characteristics of gamma radiation,
 - b. Units of radiation dose and quantity of radioactivity,
 - c. Hazards of exposure to radiation,
 - d. Levels of radiation from licensed material, and
 - e. Methods of controlling radiation dose (time, distance, and shielding);
2. Radiation detection instruments, including:
 - a. Use, operation, calibration, and limitations of radiation survey instruments;
 - b. Survey techniques; and
 - c. Use of personnel monitoring equipment;
3. Equipment topics, including:
 - a. Operation and control of radiographic exposure equipment, use of remote handling equipment, and use of storage containers, using pictures or models of source assemblies (pigtailed);
 - b. Storage, control, and disposal of licensed material; and
 - c. Inspection and maintenance of equipment;
4. The requirements of pertinent Agency rules; and
5. Case histories of accidents in radiography.

H. A licensee shall maintain records of radiographer certification in accordance with subsection (I)(1) and provide proof of certification as required in subsection (A)(1).

I. A licensee shall maintain the following records for three years after each record is made:

1. Records of training for each radiographer and each radiographer's assistant. For radiographers, the records shall include radiographer certification documents and verification of certification status. All records shall include copies of written tests, dates of oral and practical examinations, and names of individuals who conducted and took the oral and practical examinations; and
2. Records of annual refresher safety training and semi-annual inspections of job performance for each radiographer and each radiographer's assistant. The records for the annual refresher safety training shall list topics discussed during training, the date of training, and names of each instructor and attendee. For inspections of job performance, the records shall include a list of the items

checked during the inspection and any non-compliance observed by the RSO.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

Appendix A. Standards for Organizations that Provide Radiography Certification

Note: For purposes of this Article an "independent certifying organization" means an organization that meets all of the criteria in this Appendix.

I. Requirements for an Organization that Provides Radiographer Certification

To qualify to provide radiographer certification an organization shall:

- A. Be a society or association, with members who participate in, or have an interest in, the field of industrial radiography;
- B. Not restrict membership because of race, color, religion, sex, age, national origin, or disability;
- C. Have a certification program that is open to nonmembers, as well as members;
- D. Be an incorporated, nationally recognized organization that is involved in setting national standards of practice within its fields of expertise;
- E. Have a staff comparable to other nationally recognized organizations, a viable system for financing its operations, and a policy-and decision-making review board;
- F. Have a set of written, organizational by-laws and policies that address conflicts of interest and provide a system for monitoring and enforcing the by-laws and policies;
- G. Have a committee, with members who can carry out their responsibilities impartially, review and approve the certification guidelines and procedures, and advise the organization's staff in implementing the certification program;
- H. Have a committee, with members who can carry out their responsibilities impartially, review complaints against certified individuals and determine sanctions;
- I. Have written procedures describing all aspects of the organization's certification program;
- J. Maintain records of the current status of each individual's certification and administration of the certification program;
- K. Have procedures to ensure that certified individuals are provided due process with respect to administration of the certification program, including a process for becoming certified and a process for imposing sanctions against certified individuals;
- L. Have procedures for proctoring examinations and qualifying proctors. The organization, through these procedures, shall ensure that an individual who proctors an examination is not employed by the same company or corporation (or a wholly-owned subsidiary of the company or corporation) that employs an examinee;
- M. Exchange information about certified individuals with the Agency, other independent certifying organizations, the NRC, or Agreement States and allow periodic review of its certification program and related records; and
- N. Provide a description to the Agency of its procedures for choosing examination sites and providing a favorable examination environment.

II. Requirements for a Certification Program

An independent certifying organization shall ensure that its certification program:

- A. Requires an applicant for certification to:
 1. Obtain training in the subjects listed in R12-1-543(G) or equivalent NRC or Agreement State regulations, and

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2. Satisfactorily complete a written examination that covers these subjects;
- B. Requires an applicant for certification to provide documentation demonstrating that the applicant has:
 1. Received training in the subjects listed in R12-1-543(G) or equivalent NRC or Agreement State regulations;
 2. Satisfactorily completed the on-the-job training required in R12-1-543(A); and
 3. Received verification by an Agreement State or a NRC licensee that the applicant has demonstrated the capability of independently working as a radiographer;
- C. Provides procedures that protect examination questions from disclosure;
- D. Provides procedures for denying certification to an applicant and revoking, suspending, and reinstating a certificate;
- E. Provides a certification period that is not less than three years or more than five years, procedures for renewing certifications and, if the procedures allow renewals without examination, a system for assessing evidence of recent full-time employment and annual refresher training; and
- F. Provides a timely response to inquiries, by telephone or letter, from members of the public, about an individual's certification status.

III. Requirements for a Written Examination

An independent certifying organization shall ensure that its examination:

- A. Is designed to test an individual's knowledge and understanding of the subjects listed in R12-1-543(G);
- B. Is written in a multiple-choice format; and
- C. Has psychometrically valid questions drawn from a question bank and based on the material in R12-1-543(G).

Historical Note

New Appendix made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 6. USE OF X-RAYS IN THE HEALING ARTS**R12-1-601. Repealed****Historical Note**

Former Rule Section F.1; Former Section R12-1-601 repealed, new Section R12-1-601 adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 8, 1986 (Supp. 86-4).

R12-1-602. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

"Accessible surface" means the external surface of the enclosure or housing provided by the manufacturer.

"Added filter" means the filter added to the inherent filtration.

"Aluminum equivalent" means the thickness of aluminum (type 1100 alloy) that affords equivalent attenuation, under specified conditions, as the material in question. (The nominal chemical composition of type 1100 aluminum alloy is 99.00 percent minimum aluminum, 0.12 percent copper).

"Annual" means annually within two months of the anniversary due date as determined by the original installation date, inspection date, survey date, or a reset date created by conducting a full survey before the anniversary date has arrived.

"Assembler" means any person engaged in the business of assembling, replacing, or installing one or more components into an x-ray system or subsystem.

"Attenuation block" means a block or stack, having dimensions 20 cm by 20 cm by 3.8 cm (7.9 inches by 7.9 inches by 1.5 inches) of type 1100 aluminum alloy or other materials that afford equivalent attenuation.

"Automatic exposure control" means a device that automatically controls one or more technique factors in order to obtain, at a preselected location or locations, a required quantity of radiation.

"Barrier" (See "Protective barrier")

"Beam axis" means a line from the source through the center of the x-ray field.

"Beam-limiting device" means a device that provides a means to restrict the dimensions of the x-ray field.

"C-arm x-ray system" means an x-ray system that has the image receptor and x-ray tube housing assembly connected by a common mechanical support system to maintain a desired spatial relationship. This system is designed to allow a change in the projection of the beam through the patient without a change in the position of the patient.

"Changeable filter" means any filter, exclusive of inherent filtration, which can be removed from the useful beam by an electronic, mechanical, or physical process.

"Cinefluorography" means fluorography that uses a movie camera to record fluorograph images on film for later playback.

"Coefficient of variation" means the ratio of the standard deviation to the mean value of a population of observations.

"Collimator" means an adjustable device, generally made of lead, that is fixed to an x-ray tube housing to intercept or collimate the useful beam and, if not made of lead, has a lead equivalency of not less than that of the tube housing assembly.

"Compression device" means a device used to bring object structures closer to the image plane of a radiograph and make a part of the human body a more uniform thickness so the optical density of the radiograph will be more uniform.

"Computed tomography" means the production of a tomogram by the acquisition and computer processing of x-ray transmission data. For purposes of these rules this term has the same meaning as "CT."

"Contact therapy system" means that the x-ray tube port is put in contact with or within 5 centimeters (2 inches) of the surface being treated.

"Control panel" means that part of the x-ray machine where switches, knobs, push-buttons, or other hardware necessary for manually setting the technique factors are located.

"Cooling curve" means the graphical relationship between heat units stored and cooling time.

"CT gantry" means the tube housing assemblies, beam-limiting devices, detectors, and the supporting structure, frame, and cover which hold or enclose these components.

"Dead-man switch" means a switch constructed so that a circuit-closing contact can be maintained only by continuous pressure on the switch by the operator.

"Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.

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“Diagnostic x-ray system” means an x-ray system designed for irradiation of any part of a human or animal body for the purpose of diagnosis or visualization.

“Direct scattered radiation” means scattered radiation that has been deviated in direction only by materials irradiated by the useful beam (see “Scattered radiation”).

“Electronic brachytherapy” means a method of radiation therapy where an electrically generated source of ionizing radiation is placed in or near the tumor or target tissue to deliver therapeutic radiation dosage.

“Entrance exposure rate” means the roentgens per unit time at the point where the center of the useful beam enters the patient.

“Equipment” (See “X-ray equipment”)

“Filter” means material placed in the useful beam to absorb undesirable radiation.

“Fluoroscopic imaging assembly” means a subsystem in which x-ray photons produce a fluoroscopic image. It includes the image receptor or receptors such as the image intensifier and spot-film device, electrical interlocks, if any, and structural material that provides a linkage between the image receptor and diagnostic source assembly.

“Fluoroscopic system” means a radiographic x-ray system used to directly visualize internal structure, the motion of internal structures, and fluids in real time, or near real-time, to aid in the treatment or diagnosis of disease, or the performance of other medical procedures.

“Focal spot” means the region of the anode target in an x-ray tube where electrons from the cathode interact to produce x-rays.

“General purpose radiographic x-ray system” means any radiographic x-ray system that, by design, is not limited to radiographic examination of a specific anatomical region.

“Gonadal shield” means a protective barrier for the testes or ovaries.

“Grid” means a device used to improve the image detail in a radiograph by reducing the intensity of x-ray scatter radiation exiting the film side of the patient.

“Half-value layer” or “HVL” means the thickness of a specified material that attenuates the beam of radiation to an exposure rate that is one-half of its original value. In this definition, the contribution of any scattered radiation, other than that which is present initially in the beam, is excluded.

“Healing arts radiography” means the application of x-radiation to human patients for diagnostic or therapeutic purposes by a licensed practitioner or a person certified in accordance with R12-1-603(B)(1), at the direction of a licensed practitioner. Healing arts radiography includes:

- Positioning the x-ray beam with respect to the patient,
- Anatomical positioning of the patient,
- Selecting exposure factors, or
- Initiating the exposure.

“Healing arts screening” means the application of radiation from an x-ray machine to a human for the detection or evalua-

tion of health indications when the tests are not specifically and individually ordered by a licensed practitioner.

“Image intensifier” means an electronic device, installed in an x-ray system housing, which instantaneously converts an x-ray pattern into a corresponding light image of higher intensity.

“Image receptor” means any device, such as a fluorescent screen or radiographic film, which transforms incident x-ray photons either into a visible image or into another form which can be made into a visible image by further transformation.

“Inherent filtration” means the filtration of the useful beam by permanently installed components of the tube housing assembly.

“Kilovolts peak” or “kVp” (See “Peak tube potential”)

“Lateral fluoroscope” means the x-ray tube and image receptor combination in a biplane system dedicated to the lateral projection. It consists of the lateral x-ray tube housing assembly and the lateral image receptor that are fixed in position relative to the table with the x-ray beam axis parallel to the plane of the table.

“Lead equivalent” means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.

“Leakage radiation” means all radiation emanating from the tube housing except the useful beam and radiation produced when the exposure switch or timer is not activated.

“Leakage technique factors” means the technique factors associated with the diagnostic source assembly that are used in measuring leakage radiation. Included are:

For capacitor energy storage equipment, the maximum-rated peak tube potential and the maximum-rated number of exposures in an hour for operation at the maximum-rated peak tube potential with the quantity of charge per exposure being 10 millicoulombs (mAs) or the minimum obtainable from the unit, whichever is larger;

For field emission equipment rated for pulsed operation, the maximum-rated peak tube potential and maximum-rated number of x-ray pulses in an hour for operation at the maximum-rated peak tube potential; and

For all other source assemblies, the maximum-rated peak tube potential and maximum-rated continuous tube current for the maximum-rated peak tube potential.

“mA” means milliampere.

“Mammographic x-ray system” means an x-ray system that is specifically engineered to image human breasts.

“mAs” means milliampere second.

“Mobile equipment” (See “X-ray equipment”)

“Peak tube potential” means the maximum value of the potential difference across the x-ray tube during an exposure.

“Phantom” means a volume of material that behaves in a manner similar to tissue with respect to the attenuation and scattering of radiation. (i.e. “Breast phantom” means an artificial test object that simulates the average composition of, and various structures in the breast.)

“Phototimer” (See “Automatic exposure control”)

“Portable equipment” (See “X-ray equipment”)

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“Primary protective barrier” (See “Protective barrier”)

“Protective apron” means an apron made of radiation, absorbing material used to reduce radiation exposure.

“Protective barrier” means a barrier of radiation-absorbing material used to reduce radiation exposure.

“Primary protective barrier” means the material, excluding filters, placed in the useful beam.

“Secondary protective barrier” means the material which attenuates stray radiation.

“Protective glove” means a glove made of radiation- absorbing material used to reduce radiation exposure.

“Radiologic physicist” means an individual who:

Is certified by the American Board of Radiology, American Board of Medical Physics, or the American Board of Health Physics;

Possesses documentation of state approval;

Holds a master's degree or higher in a physical science; and

Meets the training and certification requirements in R12-1-615(A)(1)(c).

“Scattered radiation” means radiation that, during passage through matter, has been deviated in direction. (See “Direct scattered radiation”)

“Screen” or “intensifying screen” means a device that converts the energy of the x-ray beam into visible light that interacts with the radiographic film, forming a latent image, or contains photostimulable phosphor plates that upon exposure, emit visible or nonvisible light to create an image.

“Secondary protective barrier” (See “Protective barrier”)

“Shutter” (See “Collimator”)

“Source” means the focal spot of the x-ray tube.

“Source-to-image receptor distance” or “SID” means the distance from the source to the center of the input surface of the image receptor.

“Spot check” means an abbreviated calibration procedure which is performed to assure that a previous calibration continues to be valid. Also, a spot film may be taken to improve visualization by arresting motion and to document medical observations. Note that in some cases, a film may not be created.

“Stationary equipment” (See “X-ray equipment”)

“Stray radiation” means the sum of leakage and scattered radiation.

“System” (See “X-ray system”)

“Technique chart” means a tabulation of technique factors.

“Technique factors” means the following conditions of operation:

For capacitor energy storage equipment, peak tube potential in kV and quantity of charge in mAs;

For field emission equipment rated for pulsed operation, peak tube potential in kV, and number of x-ray pulses;

For CT x-ray systems designed for pulsed operation, peak tube potential in kV, scan time in seconds, and either tube current in mA, x-ray pulse width in seconds, and number of x-ray pulses per scan, or the product of tube current, x-ray pulse width, and number of x-ray pulses in mAs;

For CT x-ray systems not designed for pulsed operation, peak tube potential in kV, and either tube current in mA and scan time in seconds, or the product of tube current, exposure time in mAs, when the scan time and exposure time are equivalent; and

For all other equipment, peak tube potential in kV, and either tube current in mA and exposure time in seconds, or the product of tube current and exposure time in mAs.

“Treatment simulator” means a diagnostic x-ray system that duplicates a medical particle accelerator or other teletherapy in terms of its geometrical, mechanical, and optical qualities; the main function of which, is to display radiation treatment fields so that the target volume may be accurately included in the area of irradiation without delivering excess radiation to surrounding normal tissue.

“Tube” means x-ray tube unless otherwise specified.

“Tube housing assembly” means the tube housing with the tube installed. It includes high-voltage or filament transformers and other elements contained within the tube housing.

“Tube rating chart” means the set of curves that specify the rated limits of operation of the tube in terms of the technique factors.

“Useful beam” means the radiation emanating from the tube housing port or the radiation head and passing through the aperture of the beam-limiting device when the exposure controls are in a mode that causes the system to produce radiation.

“Visible area” means that portion of the input surface on the image receptor over which incident x-ray photons are producing a visible image.

“X-ray equipment” means an x-ray system, subsystem, or component described further by the following terms:

“Hand-held” means x-ray equipment designed to be held by an operator while being used.

“Mobile” means x-ray equipment mounted on a permanent base with wheels or casters for moving while completely assembled.

“Portable” means x-ray equipment designed to be hand-carried, but used with a cord or delayed timer system that allows the operator to be six feet or more away from the useful beam.

“Stationary” means x-ray equipment installed in a fixed location.

“Transportable mobile” means x-ray equipment installed in a vehicle or trailer.

“X-ray system” means an assemblage of components for the controlled production of x-rays. It includes, at minimum, an x-ray high-voltage generator, an x-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components that function with the system are considered integral parts of the system.

“X-ray tube” means any electron tube that is designed for the conversion of electrical energy into x-ray energy. For purposes

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of the rules contained in 12 A.A.C. 1, this term is synonymous with "tube."

Historical Note

Former Rule Section F.2; Former Section R12-1-602 repealed, new Section R12-1-602 adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-603. Operational Standards, Shielding, and Darkroom Requirements

- A.** A person shall not make, sell, lease, transfer, lend, or install x-ray equipment or the supplies used in connection with the equipment unless the supplies and equipment, when properly placed in operation and properly used, meets the requirements of 12 A.A.C. 1.
- B.** A registrant shall direct the operation of x-ray machines under the registrant's control and assure that all of the following provisions are met in the operation of x-ray machines:
1. The registrant shall not permit any individual to engage in the practice of "Healing Arts Radiography" using equipment under the registrant's control, unless the individual possesses, and displays in the primary employer's facility, an official certificate issued by, or is exempt from, the Medical Radiologic Technology Board of Examiners that contains an original signature of its Director or designee. A copy of the certificate shall be posted at any secondary employment location with documentation that verifies that the employer has physically seen the official certificate and has annotated on the copy the location where the official certificate may be viewed by Agency staff.
 2. The registrant shall maintain records documenting compliance with subsection (B)(1) for each individual practicing "Healing Arts Radiography" using equipment under the registrant's control,
 3. The registrant shall provide safety rules to each individual operating x-ray equipment under the registrant's control, including any restrictions in operating procedures necessary for the safe use of the equipment and require that the operator demonstrate familiarity with 12 A.A.C. 1.
- C. Shielding**
1. Each registrant shall provide each installation with primary and secondary protective barriers that are necessary to assure compliance with 12 A.A.C. 1, Article 4.
 2. A registrant shall ensure that attenuation provided by a protective barrier meets or exceeds the level of protection established in Report No. 147 Structural Shielding Design for Medical X-ray Imaging Facilities, November 19, 2004, by the National Council on Radiation Protection and Measurements, (NCRP), NCRP Publications, 7910 Woodmount Ave., Suite 400, Bethesda, MD 20814-3095. This report is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. Copies of the report are available from NCRP Publications: online at <http://www.ncrppublications.org>; toll free at (800) 229-2652 (Ext. 25); or e-mail at NCRPpubs@NCRPonline.org. Each registrant shall use this incorporated material to provide sufficient shielding to prevent a public exposure that exceeds the limits in R12-1-416.

3. A registrant shall:
 - a. Mount each lead barrier so that the barrier will not sag or cold flow because of its own weight and protect the barrier from damage;
 - b. Use barriers designed so that joints between different ends of protective material do not impair the overall protection of the barriers;
 - c. Use barriers designed so that joints at the floor and ceiling do not impair the overall protection of the barriers;
 - d. Use windows, window frames, doors, and door frames that have the same lead equivalence required in the adjacent walls; and
 - e. Cover holes in protective barriers so that overall attenuation is not impaired.
 4. A registrant shall also meet the structural shielding requirements in R12-1-607(C), if the x-ray system in question is not a mobile fluoroscopic unit, dental panoramic, cephalometric, dental CT, or intraoral radiographic system.
- D. Film Processing and Darkroom Requirements.** A registrant shall:
1. Ensure that the darkroom is light-tight and use proper safe-lighting such that any film type in use exposed in a cassette to x-ray radiation sufficient to produce an optical density from 1 to 2 when processed shall not suffer an increase in density greater than 0.1 (0.05 for mammography) when exposed in the darkroom for two minutes with all safe-lights illuminated. (A processor with a daylight loader satisfies this requirement.);
 2. Ensure that film is stored in a cool, dry place and is protected from radiation exposure; and that film located in open packages is stored in a light-tight container;
 3. Ensure that film cassettes and intensifying screens are inspected annually, cleaned, and replaced as necessary;
 4. Ensure that film cassettes contain film and intensifying screens that have the same sensitivity;
 5. Ensure that automatic film processors develop film in accordance with time-temperature relationships recommended by the film manufacturer;
 6. Ensure that manually developed film is developed in accordance with the time-temperature relationships recommended by the manufacturer, and that a timer, thermometer, and a time-temperature chart are available and used in the darkroom;
 7. Ensure that film processing solutions are prepared and maintained in accordance with the directions of the manufacturer;
 8. Ensure that outdated film is not used for diagnostic radiographs.
 9. Follow manufacturer's recommendations for cleaning or inspection of computed radiography (CR) cassettes, but not less than annually;
 10. Follow manufacturer's recommendations for preventive maintenance on digital radiography panels or cassettes, but not less than annually; and
 11. Maintain documentation that demonstrates that requirements of this subsection are being met for three years for agency review from the date of inspection.

Historical Note

Former Rule Section F.3; Former Section R12-1-603 repealed, new Section R12-1-603 adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

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Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-604. General Procedures

A. Each registrant shall ensure the following procedural requirements are met in the operation of x-ray equipment:

1. An x-ray machine which does not meet the provisions of this Chapter shall not be operated for diagnostic or therapeutic purposes, unless specifically exempted by the Agency.
2. Except for patients who cannot be moved out of the room, only the individuals required for the radiological procedure or in training may be present in the room during radiographic exposure, and all the following requirements apply:
 - a. All individuals shall be positioned such that no part of the body, including the extremities not protected by 0.5 mm lead equivalent, will be struck by the useful beam.
 - b. Staff and ancillary personnel shall be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than 0.25 mm lead equivalent.
 - c. Individuals, other than the patient to be examined, who cannot be removed from the room during mobile or portable radiography shall be protected from the direct scatter radiation by whole body protective barriers of 0.25 millimeters lead equivalent or shall be so positioned that the nearest portion of the body is at least 2 meters (6.5 feet) from both the tube head and the nearest edge of the image receptor.
 - d. If a portion of the body of any staff or ancillary personnel is potentially subjected to stray radiation that could result in that individual receiving 10 percent of the maximum permissible dose as defined in Article 4 of this Chapter, the registrant shall provide additional protective devices as specified by the Agency.
3. An individual shall not be exposed to the useful beam except for a healing arts purpose authorized by a licensed practitioner of the healing arts. The following acts are prohibited:
 - a. Exposure of an individual without meeting the required healing art requirements and without a valid directive from a licensed practitioner;
 - b. Exposure of an individual for training, demonstration, or other non-healing arts purpose;
 - c. Exposure of an individual for the purpose of healing arts screening, except as authorized by the Agency after submitting to the Agency the information listed in Appendix A of this Article. (If any information submitted to the Agency changes, the registrant shall immediately notify the Agency of the changes.);
 - d. Routinely holding film or a patient during an exposure to x-ray radiation; or
 - e. Exposure of an individual to fluoroscopy as a positioning method for general purpose radiological procedures.

4. All persons who are associated with the operation of an x-ray system are subject to the occupational exposure limits specified in Article 4. Exposure of a personnel monitoring device to deceptively indicate a dose delivered to an individual is prohibited.
 5. The registrant shall check radiation protective equipment for reliability and integrity defects on an annual basis, as follows:
 - a. Aprons, gloves, and shields shall be checked for holes, tears, and breaks.
 - b. If defects are found in the equipment, the registrant shall replace or remove it from service. Equipment removed from service shall not be put back into service until it is repaired.
 - c. A record of the annual reliability and integrity check and any equipment replacement shall be maintained for three years.
- B. The registrant shall maintain the following records for each x-ray machine:
1. Survey, calibration, maintenance, and modification records regarding the x-ray machine or room, which include the name of the person who performed the service; and
 2. Correspondence with the Agency regarding the x-ray machine facility.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-605. X-ray Machine Standards

- A. A registrant shall prevent leakage radiation from the diagnostic source assembly measured at a distance of 1 meter in any direction from the source assembly from exceeding 25.8 $\mu\text{C}/\text{kg}$ (100 milliroentgens) in one hour when the x-ray tube is operated at its leakage technique factors. The Agency shall determine compliance by obtaining measurements averaged over an area of 100 square centimeters (15.5 square inches) with no linear dimension greater than 20 centimeters (7.9 inches).
- B. The registrant shall prevent radiation emitted by a component other than the diagnostic source assembly from exceeding 516 nC/kg (2 milliroentgens) in one hour at 5 centimeters from any accessible surface of the component when it is operated in an assembled x-ray system under any conditions for which it was designed. The Agency shall determine compliance by obtaining measurements averaged over an area of 100 square centimeters (15.5 square inches) with no linear dimension greater than 20 centimeters (7.9 inches).
- C. Beam quality.
1. The registrant shall prevent the useful beam half-value layer (HVL) for diagnostic x-ray given x-ray tube potential from falling below the values shown in Table I. If it is necessary to determine the HVL at an x-ray tube potential that is not listed in Table I, the registrant shall use linear interpolation or extrapolation to make the determination.

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Design operating range (kilovolts peak)	Measured potential (kilovolts peak)	HVL (millimeters of aluminum) Dental Intraoral Units manufactured after December 1, 1980	Medical X-ray Units manufactured before June 10, 2006 and Dental Intraoral Units manufactured on or before December 1, 1980	Medical X-ray Units manufactured on or after June 10, 2006
Below 51	30	1.5	0.3	0.3
	40	1.5	0.4	0.4
	50	1.5	0.5	0.5
51 to 70	51	1.5	1.2	1.3
	60	1.5	1.3	1.5
	70	1.5	1.5	1.8
	Above 70	71	2.1	2.1
Above 70	80	2.3	2.3	2.9
	90	2.5	2.5	3.2
	100	2.7	2.7	3.6
	110	3.0	3.0	3.9
	120	3.2	3.2	4.3
	130	3.5	3.5	4.7
	140	3.8	3.8	5.0
	150	4.1	4.1	5.4

- 2. If the registrant demonstrates that the aluminum equivalent of the total filtration in the primary beam is not less than that shown in Table II, the registrant is considered to have met the criteria in subsection (C)(1).

Table II - Filtration Required vs. Operating Voltage

Operating Voltage (kVp)	Total Filtration (inherent plus added) (millimeters aluminum equivalent)
Below 51	0.5 millimeters
51 - 70	1.5 millimeters
Above 70	2.5 millimeters

- 3. The registrant shall use beryllium window tubes that have a minimum of 0.5 millimeters aluminum equivalent filtration permanently mounted in the useful beam.
- 4. For capacitor energy storage equipment, the Agency shall determine compliance with the maximum quantity of charge per exposure.
- 5. When determining the minimum aluminum equivalent filtration, the registrant shall include the filtration contributed by all materials that are always present between the focal spot of the tube and the patient (for example, a tabletop when the tube is mounted "under the table" and inherent filtration of the tube).
- D. Multiple tubes. If two or more radiographic tubes are controlled by one exposure switch, the operator shall clearly indicate which tube or tubes have been selected before initiation of the exposure, activating one light on the x-ray control panel and a second light at or near the tube housing assembly, each indicating the tube or tubes that have been selected.
- E. Mechanical support of tube head. The registrant shall adjust the tube housing assembly supports so that the tube housing assembly will remain stable during an exposure, unless the tube housing movement is a designed function of the x-ray system.

- F. Exposure reproducibility. The coefficient of variation shall not exceed 0.10 when all technique factors are held constant. This requirement is satisfied if the value of the average exposure (E) is greater than or equal to five times the difference between the maximum exposure (E_{max}) and minimum exposure (E_{min}) when four exposures are made at identical technique factors, [E ≥ 5(E_{max} - E_{min})].
- G. Accuracy deviation. A registrant shall not use an x-ray machine if the measured technique factors for kVp and time duration are not within the limits specified by the manufacturer. In the absence of the manufacturer's specifications, a registrant shall not use an x-ray machine if the measured kVp is not within 10 percent of the indicated kVp value and the measured time duration is not within 20 percent of the indicated time.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsections (A) and (B) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-606. Fluoroscopic and Fluoroscopic Treatment Simulator Systems

- A. Useful beam limitation. A registrant shall:
 1. Provide beam-limiting devices that restrict the entire cross section of the useful beam to less than the area of the primary barrier at any Source-to-Image Receptor Distance (SID);
 2. Ensure that the x-ray field size produced by fluoroscopic systems without image intensification does not extend beyond the visible area of the image receptor at any SID;

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3. Ensure that the x-ray field size produced by fluoroscopic systems with image intensification and automatic shutter control does not exceed the diameter of the image receptor at any SID;
 4. Ensure that the x-ray field size produced by fluoroscopic systems with image intensification and manual shutter control does not exceed the diameter of the image receptor with the fluoroscopic imaging assembly positioned at the maximum usable distance above the table top; and
 5. Ensure that the x-ray field size produced by fluoroscopic systems with image intensification and manual shutter control, where the fluoroscopic tube is above the table top, does not exceed the diameter of the image receptor with the shutters open to the fullest extent, and at the maximum SID which the fluoroscopic tube is capable of producing radiation.
- B. Fluoroscopic primary protective barrier.** A registrant shall:
1. Provide the fluoroscopic imaging assembly with a primary protective barrier that always intercepts the entire cross section of the useful beam at any SID.
 2. Ensure that the fluoroscopic tube is not capable of producing radiation unless the primary protective barrier is in a position to intercept the entire cross section of the useful beam.
 3. Ensure that fluoroscopic radiation production automatically terminates if the primary protective barrier is removed from the useful beam.
 4. Ensure that the fluoroscopic primary protective barrier meets the following requirements for attenuation of the useful beam:
 - a. For equipment installed before November 15, 1967, the required lead equivalent of the barrier is not less than 1.5 millimeters for fluoroscopes that produce less than 100 kVp, 1.8 millimeters for fluoroscopes that produce at least 100 kVp but less than 125 kVp, and 2.0 millimeters for fluoroscopes that produce 125 or more kVp. (For conventional fluoroscopes, these requirements may be assumed to have been met if the exposure rate measured at the viewing surface of the fluorescent screen does not exceed 12.9 microcoulombs per kilogram (50 milliroentgens) per hour with the screen in the primary beam of the fluoroscope without a patient, under normal operating conditions.) For equipment installed or reinstalled, the required lead equivalent of the barrier is 2.0 millimeters for fluoroscopes that produce less than 125 kVp or 2.7 millimeters for fluoroscopes that produce 125 or more kVp.
 - b. For fluoroscopic systems that use image intensification, the exposure rate, due to transmission through the primary protective barrier, does not exceed 516 nC/kg (2 milliroentgens) per hour at 10 centimeters (4 inches) from any accessible surface of the fluoroscopic imaging assembly, beyond the plane of the image receptor for each 258 μ C/kg (1 roentgen) per minute of entrance exposure rate.
 - c. Compliance with subsections (B)(4)(a) and (b) is determined with the image receptor positioned 35.5 centimeters (14 inches) from the panel or table top, at normal operating technical factors and with the attenuation block in the useful beam for systems with image intensification.
- C. Entrance exposure rate limits.** A registrant shall ensure that:
1. The exposure rate, measured at the point where the center of the useful beam enters the patient does not exceed 2.6 mC/kg (10 roentgens) per minute at any combination of tube potential and current, except during recording of fluoroscopic images or if provided with optional high-level control.
2. If provided with optional high-level control, the equipment is not operable at any combination of tube potential and current that will result in an exposure rate in excess of 2.6 mC/kg (10 roentgens) per minute at the point where the center of the useful beam enters the patient, unless the high-level control is activated, in which case an exposure rate in excess of 5.2 mC/kg (20 roentgens) per minute is prohibited.
 - a. Special means of activation of high-level controls, such as additional pressure applied continuously by the operator, are required to avoid accidental use.
 - b. A continuous signal audible to the fluoroscopist is required to indicate that the high-level control is being employed.
 3. The Agency shall determine compliance with subsections (C)(1) and (2) as follows:
 - a. Remove grids and compression devices from the useful beam during the measurement;
 - b. If the source is below the table, measure the exposure rate 1 centimeter above the table top or cradle; and
 - c. If the source is above the table, measure the exposure rate 30 centimeters (11.8 inches) above the table top with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement;
 - d. For fluoroscopy involving a mobile C-arm x-ray system, measure the exposure rate 30 centimeters (11.8 inches) from the input surface of the fluoroscopic imaging assembly;
 - e. For fluoroscopy involving a C-arm x-ray system, measure the exposure rate 30 centimeters (11.8 inches) from the input surface of the fluoroscope imaging assembly, with the x-ray source positioned at any available SID, provided that the end of the beam-limiting device or spacer is not closer than 30 centimeters (11.8 inches) from the input surface of the fluoroscopic image assembly; and
 - f. For a lateral fluoroscope, measure the exposure rate 15 centimeters (5.9 inches) from the centerline of the x-ray table and in the direction of the x-ray source with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters (5.9 inches) to the centerline of the x-ray table.
- D.** The registrant shall ensure that the source-to-skin distance is not less than:
1. 38 centimeters (15 inches) on stationary fluoroscopes installed after January 2, 1996;
 2. 35.5 centimeters (14 inches) on stationary fluoroscopes which are in operation before January 2, 1996;
 3. 30 centimeters (11.8 inches) on all mobile fluoroscopes; and
 4. 20 centimeters (8 inches) for image-intensified fluoroscopes used for a specific surgical application. The registrant shall follow any precautionary measures in the users operating manual.
- E.** Each fluoroscopic system installation is subject to all of the following requirements for the control of stray radiation. A registrant shall:

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1. Provide a shielding device of at least 0.25 millimeter lead equivalent for covering the Bucky-slot during fluoroscopy;
 2. Except for fluoroscopy performed using portable or mobile C-arm x-ray systems or during surgical procedures or cardiac catheterization, provide protective drapes, or hinged or sliding panels of at least 0.25 millimeters lead equivalent, between the patient and fluoroscopist to intercept scattered radiation that would otherwise reach the fluoroscopist and others near the machine, but not substitute drapes and panels for a protective apron; and
 3. Ensure that protective aprons of at least 0.25 millimeter lead equivalent are worn in the fluoroscopy room by each person, except the patient, whose body is likely to be exposed to 50 μ Sv/hr (5 mR/hr) or more.
- F. Exposure control.** A registrant shall:
1. Ensure that activation of the fluoroscopic tube is controlled by a "dead-man" switch;
 2. Provide a manual reset cumulative timing device, which is activated only during production of radiation in the fluoroscopic mode, to indicate elapsed time by an audible signal or terminate production of radiation;
 3. Provide a device for exposure control in the "spot film" mode that terminates exposure either automatically, or after a preset time interval, preset number of pulses, preset product of current and time, or preset exposure; and
 4. Ensure that the x-ray tube potential and current are continuously indicated.
- G.** A registrant shall provide systems used for mobile fluoroscopy with image intensification.
- H.** Fluoroscopic treatment simulators. Simulators are exempt from subsections (A) through (G). A registrant shall:
1. Use a beam limiting device that restricts the beam to the area of clinical interest.
 2. Include and label devices for settings or physical factors, such as kVp, mA, or exposure time on the control panel;
 3. Ensure that the fluoroscopic exposure switch or switches are of the "deadman" type;
 4. Ensure that each person whose presence is necessary is in the simulator room during exposure and protected with a lead apron of at least 0.5 millimeter lead equivalent or a portable shield. Any person who places their hands in the useful x-ray beam shall wear leaded gloves; and
 5. Ensure that the operator stands behind a barrier and is able to observe the patient during simulator exposures.
- Historical Note**
- Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-606 repealed, new Section R12-1-606 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).
- R12-1-607. Additional X-ray Machine Standards, Shielding Requirements, and Procedures, Except Mobile Fluoroscopic, Dental Panoramic, Cephalometric, Dental CT, or Dental Intra-oral Radiographic Systems**
- A.** Useful beam limitation. A registrant shall:
1. Provide a means to restrict the useful beam to the area of clinical interest for any combination of SID and image receptor size employed.
 2. Ensure that beam-limiting devices meet the following requirements:
 - a. Devices that project a circular radiation field restrict the diameter of the useful beam, not to exceed the diagonal dimension of the image receptor by greater than 2 percent of the SID;
 - b. Devices that project a rectangular or square radiation field restrict the useful beam to the longitudinal and transverse dimensions of the image receptor to within 2 percent of the SID;
 - c. Beam limiting devices that do not incorporate light beams to define the projected radiation field are clearly labeled, indicating the SID and image receptor size at which each device complies with the applicable requirements of subsection (A)(2)(a) or (b);
 - d. Adjustable beam-limiting devices installed after July 31, 1971, incorporate light beams to define the projected dimensions of the useful beam and provide an average illumination of not less than 100 lux (9 foot-candles) at 1 meter (3.3 feet) or at the maximum SID, whichever is less. The average illumination shall be based upon measurements made in the approximate center of each quadrant of the light field; and
 - e. All beam-limiting devices installed, on general purpose fixed and mobile radiographic systems, provide stepless means of continuous adjustment of the projected radiation field size.
 3. Provide a means to align the center of the radiation field to the center of the image receptor to within 2 percent of the SID.
- B.** Radiation exposure control. A registrant shall:
1. Provide a means to terminate the exposure at a preset time interval, preset product of current and time, preset number of pulses, or a preset exposure to the image receptor. The registrant shall ensure that it is not possible to make an exposure when the exposure control device is set to a "zero" or "off" position if either position is provided.
 2. Ensure that the exposure switch is a "dead-man" switch, and except for those used with "spot-film" devices in fluoroscopy, is arranged so that it cannot be conveniently operated outside a shielded area.
 3. Provide x-ray systems with automatic exposure control, which indicates at the control panel when this mode is selected, and a visual and audible signal, which indicates termination of the exposure.
 4. Use a control panel that includes:
 - a. A device (usually a milliamp meter) that will give a positive indication during radiation production; and
 - b. Control setting indicators or meters that indicate the appropriate technical factors: kVp, mAs, mA, or exposure time, and any special mode selected for the exposure.
- C.** Structural shielding. A registrant shall:
1. Ensure that all wall, floor and ceiling areas struck by the useful beam have primary protective barriers. Primary protective barriers in walls shall extend from the finished floor to a minimum height of 2.13 meters (7 feet);
 2. Ensure that secondary protective barriers are provided in all wall, floor, and ceiling areas that do not have primary protective barriers or where the primary protective barrier

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requirements are lower than the secondary barrier requirements;

3. Ensure that the operator's station is behind a protective barrier sufficient to ensure compliance with R12-1-408, R12-1-414, and R12-1-416, and the operator is able to communicate with the patient from the operator's station.
 4. Provide a window of transparent material equal in attenuation to that required by the adjacent barrier, or a mirror system, that is large enough and placed so that the operator can see the patient during exposure without having to leave the protected area.
- D. Operating procedures.** A registrant shall:
1. Use mechanical supporting or restraining devices, if a patient must be held in position for radiography. If the patient must be held by an individual, the registrant shall ensure that the individual is protected with appropriate shielding devices, such as protective gloves and apron, and is positioned so that no part of the body of the individual holding the patient is struck by the useful beam;
 2. Ensure that only individuals required for the radiographic procedure are in the radiographic room during exposure, and, except for the patient, all these individuals are equipped with protective devices;
 3. Restrict the useful beam to the clinical area of interest;
 4. Provide a chart in the vicinity of the diagnostic x-ray system's control panel that specifies, for all routine examinations performed with the system, the following information:
 - a. Patient's anatomical size and technique factors;
 - b. Type and size of the film or film screen combination;
 - c. Type and focal distance of the grid, if any;
 - d. X-ray source-to-image receptor distance; and
 - e. Type and location of gonad shielding.
 5. Provide documentation of the following items:
 - a. The patient's identity;
 - b. The x-ray examination, as recorded in a radiographic log;
 - c. The date the examination is performed;
 - d. The number of projections (if applicable), or on-time, or dose factors depending upon the unit; and
 - e. A method of identifying the individual who performed the examination.
 6. The registrant shall maintain in chronological order, the documentation required in subsection (D)(5) in written or readily available electronic form. The documentation shall be maintained for three years from the date the examination is performed.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-607 repealed, new Section R12-1-607 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-608. Mobile Diagnostic Radiographic and Mobile Fluoroscopic Systems, Except Dental Panoramic, Cephalometric, Dental CT, or Dental Intraoral Radiographic Systems**A. Equipment**

1. All requirements of R12-1-607(A) and (B) apply.
2. For mobile radiographic units the registrant shall provide a "dead-man" switch, together with an electrical cord of sufficient length so that the operator can stand out of the

useful beam and at least 1.82 meters (6 feet) from the patient during all x-ray exposures.

3. A registrant shall ensure that a cone, spacer frame, or inherent provision is made so that the equipment is not operated at source-skin distances of less than 20.3 centimeters (8 inches).
- B. Structural shielding.** If a mobile unit is used routinely in one location, it is considered a fixed installation subject to the shielding requirements in R12-1-603(C), and R12-1-607(C).
- C. Operating procedures**
1. All provisions of R12-1-607(D) apply.
 2. An individual who operates a mobile x-ray system shall comply with R12-1-419(B).

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsections (A) and (C) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-609. Chest Photofluorographic Systems

Use of chest photofluorographic systems for diagnosis of human disease is prohibited.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsections (A) and (C) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-610. Dental Intraoral Radiographic Systems**A. Equipment.** A registrant shall:

1. Use a protective tube housing of diagnostic type;
2. Use diaphragms or cones for restricting the useful beam and to provide the same degree of protection as the housing. The diameter of the useful beam at the end of the cone or spacer frame shall not be more than 7.6 centimeters (3 inches) for intraoral radiography;
3. Ensure that a cone or spacer frame provides a source-to-skin distance of not less than 17.8 centimeters (7 inches) with apparatus operating above 50 kVp or 10 centimeters (4 inches) with apparatus operating at 50 kVp or below for intraoral radiography;
4. Provide a timer to terminate the exposure at a preset time interval, a preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor;
5. Ensure that it is not possible to make an exposure if the timer is set to the "zero" or "off" position;
6. Ensure that the tube head remains stationary if placed in the exposure position;
7. Ensure that the exposure initiating device is a "dead-man" switch; and
8. Use a control panel that includes:
 - a. A means to provide visual or audible indication, detectable at or from the operator's position, during x-ray production or exposure termination; and
 - b. Indication of technique factors for kVp, mA, exposure time, and any special mode that may be selected for the exposure.

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9. Use technique factors, where deviation of measured values from indicated values for kVp and exposure time do not exceed the limits specified by the manufacturer. In the absence of the manufacturer's specifications, the deviation shall not exceed plus or minus 10 percent of the indicated value for kVp and plus or minus 20 percent for exposure time duration.
 10. For a digital system that uses an electronic sensor, use digital radiography techniques that permit reducing x-ray beam on-time to 25 percent of the exposure time required for "D" speed film or lower, reducing radiation to the patient by the same rate.
 11. For a computed radiography (imaging plate (IP) made of photostimulable phosphor) system that uses an imaging plate, use radiography techniques that permit reducing x-ray beam on-time to 50 percent of the exposure time required for "D" speed film or lower, reducing radiation to the patient by the same rate.
- B. Structural shielding.** The registrant shall:
1. Provide dental installations with primary and secondary barriers to ensure compliance with the personnel exposure requirements in Article 4 of this Chapter; (Note: In many cases, structural materials of ordinary walls suffice as a protective barrier without addition of special shielding material.)
 2. Install primary protective barriers between rooms or areas if dental x-ray units are used in adjacent rooms or areas;
 3. Provide each installation with a protective barrier for the operator or arrange the installation so that the operator can stand at least 1.82 meters (6 feet) from the patient and well away from the useful beam;
 4. Arrange the operator's position to allow visual contact with the patient during exposure; and
 5. Comply with fixed installation requirements, if a mobile unit is used routinely in one location.
- C. Operating procedures**
1. A dentist or other persons shall not hold patients or films during exposure. Only persons required for the radiographic procedure are allowed in the radiographic room during exposures.
 2. An operator shall stand at least 1.82 meters (6 feet) from the patient or behind a protective barrier during each exposure.
 3. An operator shall ensure that only the patient is in the useful beam.
 4. The licensed practitioner or other person shall not hold the tube housing or the cone during the exposure.
 5. A registrant shall not perform dental fluoroscopy without an image intensifier.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-610.01. Hand-held Intraoral Dental Radiographic Unit Requirements For Use

- A.** Registrants are subject to the following requirements for Intraoral dental radiographic units designed to be operated as a hand-held unit:
1. For all uses:

- a. Operators of hand-held intraoral dental radiographic units shall be specifically trained to operate such equipment.
 - b. A hand-held intraoral dental radiographic unit shall be held without any motion during a patient examination. A tube stand may be utilized to immobilize a hand-held intraoral dental radiographic unit during patient examination.
 - c. The operator shall ensure there are no bystanders within a radius of at least six feet from the patient being examined with a hand-held intraoral radiographic unit.
- 2.** Additional requirements for operatories in permanent facilities:
- a. Hand-held intraoral dental radiographic units shall be used for patient examinations in dental operatories that meet the structural shielding requirements specified by the Agency or by a qualified health or medical physicist.
 - b. Hand-held intraoral dental radiographic units shall not be used for patient examinations in hallways and waiting rooms.
- B.** Hand-held units may only be used in a manner as specified on the registration issued by the Agency.

Historical Note

New Section R12-1-610.01 made by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-611. Therapeutic X-ray Systems of Less Than 1 MeV

- A.** Equipment requirements.
1. Leakage radiation. When the x-ray tube is operated at its maximum rated tube current for the maximum kVp, the leakage air kerma rate shall not exceed the value specified at the distance specified for that classification of therapeutic radiation machine. For each therapeutic radiation machine, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified:
 - a. 5-50 kVp Systems. The leakage air kerma rate measured at any position 5 centimeters from the tube housing assembly shall not exceed 1 mGy (100 mrad) in any one hour.
 - b. Greater than 50 kVp and less than 1MeV Systems. The leakage air kerma rate measured at a distance of 1 meter from the target in any direction shall not exceed 1 centigray (1 rad) in any 1 hour. This air kerma rate measurement may be averaged over areas no larger than 100 square centimeters (100 cm²). In addition, the air kerma rate at a distance of 5 centimeters from the surface of the tube housing assembly shall not exceed 30 centigray (30 rad) per hour.
 2. Permanent beam limiting devices. A registrant shall ensure that fixed diaphragms or cones used for limiting the useful beam provide the same or higher degree of attenuation as required for the tube housing assembly.
 3. Removable and adjustable beam-limiting devices. A registrant shall ensure that:
 - a. Removable and adjustable beam-limiting devices, for the portion of the useful beam to be blocked by these devices, transmit not more than 1 percent of the original x-ray beam at the maximum kilovoltage and maximum treatment filter; and
 - b. When adjustable beam limiting devices are used, the position and shape of the radiation field shall be indicated by a light beam.

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4. Filter system. A registrant shall ensure that the filter system is designed so that:
 - a. Filters cannot be accidentally displaced from the useful beam at any possible tube orientation;
 - b. For equipment installed after January 1, 2011, an interlock system prevents irradiation if the proper filter is not in place;
 - c. The air kerma rate escaping from the filter slot shall not exceed 1 centigray (1 rad) per hour at one (1) meter under any operating conditions; and
 - d. Each filter is marked regarding its material of construction and its thickness or wedge angle for wedge filters.
 5. X-ray tube immobilization. A registrant shall ensure that the tube housing assembly is capable of being immobilized during stationary treatments and the x-ray tube shall be so mounted that it cannot accidentally turn or slide with respect to the housing aperture.
 6. Focal spot marking. A registrant shall ensure that the tube housing assembly is marked so that it is possible to determine the location of the focal spot to within 5 millimeters, and the marking is readily accessible for use during calibration procedures.
 7. Therapy treatment timers. A registrant shall:
 - a. Provide a timer that has a display at the treatment control panel. The timer shall have a preset time selector and an elapsed time indicator;
 - b. Ensure that the timer is a cumulative timer that activates with the radiation, retains its reading after irradiation is interrupted or terminated, and requires the operator to reset the preset time selector after irradiation is terminated and before irradiation can be reinitiated;
 - c. Ensure that the timer terminates irradiation when a preselected time has elapsed;
 - d. Ensure that the timer permits accurate presetting and determination of exposure times as short as one second;
 - e. Ensure that the timer does not permit an exposure if set at zero; and
 - f. Ensure that the timer does not activate until the shutter is opened if irradiation is controlled by a shutter mechanism.
 8. Control panel functions. In addition to the displays required in other provisions of this Section, a registrant shall ensure that a control panel has:
 - a. An indication of whether electrical power is available at the control panel and if activation of the x-ray tube is possible;
 - b. An indication of whether x-rays are being produced;
 - c. A means for indicating kVp and x-ray tube current;
 - d. A means for terminating an exposure at any time;
 - e. A locking device that will prevent unauthorized use of the x-ray system; and
 - f. For x-ray equipment installed after January 2, 1996, a positive display of specific filters in the beam.
 9. Multiple tubes. If one control panel is used to energize more than one x-ray tube a registrant shall ensure that:
 - a. It is possible to activate only one x-ray tube during any time interval,
 - b. There is an indication at the control panel that identifies which x-ray tube is energized, and
 - c. There is an indication at the tube housing assembly when that tube is energized.
 10. Source-to-patient distance. A registrant shall ensure that there is a means of determining the source-to-patient distance to within 1 centimeter.
 11. Shutters. Unless it is possible to bring the x-ray output to the prescribed exposure parameters within five seconds, a registrant shall ensure that the entire useful beam is automatically attenuated by a shutter with a lead equivalency not less than that of the tube housing assembly. In addition the registrant shall ensure that:
 - a. After the unit is at operating parameters, the operator controls the shutter electrically from the control panel; and
 - b. An indication of shutter position appears at the control panel.
 12. Low filtration x-ray tubes. A registrant shall ensure that each x-ray system equipped with a beryllium or other low-filtration window is clearly labeled as low-filtration equipment on the tube housing assembly and at the control panel.
- B. Facility design requirements.** In addition to shielding necessary to meet the requirements of Article 4 of this Chapter, a registrant shall ensure that:
1. Warning lights. A treatment room to which access is possible through more than one entrance has a warning light, in a readily observable position near the outside of any access doors, which will indicate when the useful beam is "on."
 2. Voice communication. Two-way oral communication is possible between the patient and the operator at the control panel; or where excessive noise levels make oral communication impractical, another effective method of communication.
 3. Viewing systems. Windows, mirrors, closed-circuit television, or an equivalent system, permits continuous observation of the patient during irradiation and is located so that the operator can observe the patient from the control panel. If the primary viewing system is by electronic means (for example, television), the registrant shall have an alternate viewing system for use in the event of electronic failure.
 4. Systems above 150 kVp. For treatment rooms that contain an x-ray system capable of operating above 150 kVp a registrant shall ensure that:
 - a. All necessary shielding, except for any beam interceptor, is provided by fixed barriers;
 - b. The control panel is within a protective booth equipped with an interlocked door, or located outside the treatment rooms;
 - c. All doors of the treatment room are electrically connected to the control panel so that x-ray production cannot occur unless all doors are closed; and
 - d. Opening of any door to the treatment room during exposure results in automatic termination of x-ray production or reduction of radiation levels to an average of no more than 516 nC/kg (2 milliroentgens) per hour and a maximum of 2.6 μ C/kg (10 milliroentgens) per hour at a distance of 1 meter (3.3 feet) from the target in any direction, and restoration of the machine to full operation is possible only from the control panel after the termination or reduction.
- C. Surveys.** A registrant shall ensure that:
1. All facilities, both new and existing, or not previously surveyed, are surveyed before being put into service for the treatment of patients by, or under the direction of, a person trained and experienced in the principles of radia-

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- tion protection, and perform additional surveys of a facility after any change in the facility or a facility's equipment that might cause a significant increase in radiation hazard, before being put into service for the treatment of patients.
2. The person conducting the survey reports the survey findings in writing to the individual in charge of the facility and maintains a copy of the survey report for inspection by the Agency.
 3. The installation is operated in compliance with any limitations indicated by the protection survey required by subsection (C)(1).
- D. Calibrations.** A registrant shall ensure that:
1. The calibration of a therapeutic x-ray system includes, but is not limited to, the following determinations:
 - a. Verification that the x-ray system is operating in compliance with the design specifications;
 - b. The dose rate equivalent for each combination of field size, technique factors, filter, and treatment distance used;
 - c. The degree of congruence between the radiation field and the field indicated by the localizing device if a localizing device is used; and
 - d. An evaluation of the uniformity of the radiation field symmetry for the field sizes used and any dependence upon source housing assembly orientation;
 2. The calibration of an x-ray system is performed at intervals not to exceed annually and after any change or replacement of components that could cause a change in the radiation output;
 3. The calibration of the radiation output of the x-ray system is performed by, or under the direction of, a person trained and experienced in performing calibrations, who is physically present at the facility during calibration;
 4. Calibration of the radiation output of an x-ray system is performed with a calibrated instrument. The registrant shall ensure that calibration of the instrument is directly traceable to the National Institute of Standards and Technology (NIST) and that the instrument has been calibrated within the preceding 24 months;
 5. Records of calibration performed under subsection (D)(3) are maintained for at least three years after completion of the calibration and are made available for inspection by the Agency; and
 6. A copy of the most recent calibration is available for use by the operator at the control panel.
- E. Spot checks.** A registrant shall ensure that spot checks are performed on therapeutic x-ray systems capable of operation at greater than 150 kVp. The registrant shall ensure that spot checks meet the following requirements:
1. The spot-check procedures are in writing and have been developed by a qualified expert;
 2. The measurements taken during the spot checks demonstrate the degree of consistency of the operating characteristics that can affect the radiation output of the x-ray system;
 3. The written spot-check procedure specifies the frequency of the tests or measurements, made at intervals not to exceed monthly;
 4. The spot-check procedure identifies conditions that require recalibration of the system in accordance with subsection (D)(1); and
 5. Records of spot-check measurements performed as required by subsection (E)(3) are maintained, available for inspection by the Agency, for three years following the measurements.
- F. Operating procedures.** A registrant shall ensure that:
1. Therapeutic x-ray systems are not left unattended unless the system is secured according to subsection (A)(8)(e);
 2. If a patient must be held in position for radiation therapy, mechanical supporting or restraining devices are used;
 3. The tube housing assembly is not held by an individual during exposures; and
 4. At 150 kVp or more the patient is the only person in the treatment room during production of radiation. At less than 150 kVp an individual may be in the room with patient, provided the individual is protected by a barrier sufficient to meet the requirements of Article 4 of this Chapter.
- G. Electronic Brachytherapy units** are exempt from the requirements of this Section.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-611 repealed, new Section R12-1-611 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-611.01. Electronic Brachytherapy to Deliver Interstitial and Intracavity Therapeutic Radiation Dosage

- A.** Electronic brachytherapy devices used to deliver interstitial and intracavity therapeutic radiation dosage shall be subject to the requirements of this Section, and unless otherwise specified in this Section shall be exempt from the requirements of R12-1-611.
1. An electronic brachytherapy device that does not meet the requirements of this Section shall not be used for irradiation of patients; and
 2. An electronic brachytherapy device shall only be utilized for human use applications specifically approved by the U.S. Food and Drug Administration (FDA), unless participating in a research study approved by the registrant's Institutional Review Board (IRB).
- B.** Each facility location authorized to use an electronic brachytherapy device in accordance with this Section shall possess appropriately calibrated portable monitoring equipment. At a minimum, such equipment shall include a portable survey instrument capable of measuring dose rates over the range 10 μ Sv (1 mrem) per hour to 10 mSv (1000 mrem) per hour. The survey instrument shall be capable of measuring as low as 10 μ Sv (1 mrem) per hour in the energy range of the electronic brachytherapy unit for which the survey instrument is to be used. Published correction factors utilized in conjunction with the instrument's readings may be used to achieve sensitivity. The survey instrument or instruments shall be operable and calibrated before first use, at intervals not to exceed 12 months, and after survey instrument repairs.
- C.** Facility Design Requirements for Electronic Brachytherapy Devices. In addition to shielding adequate to meet requirements of R12-1-603(C), the treatment room shall meet the following design requirements:
1. If applicable, provision shall be made to prevent simultaneous operation of more than one therapeutic radiation machine in a treatment room.
 2. Access to the treatment room shall be controlled by a door at each entrance.
 3. Each treatment room shall have provisions to permit continuous oral communication and visual observation of the

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- patient from the treatment control panel during irradiation. The electronic brachytherapy device shall not be used for patient irradiation unless the patient can be observed.
4. For electronic brachytherapy devices capable of operating below 150 kVp, radiation shielding for the staff in the treatment room may be available, either as a portable shield or as localized shielded material around the treatment site or both, in lieu of the requirements for room shielding. The shielding shall meet the requirements of R12-1-603(C).
 5. For electronic brachytherapy devices capable of operating at or greater than 150 kVp, the facility must meet the requirements of R12-1-611(B)(4).
- D. Control Panel Functions.** The control panel, in addition to the displays required by other provisions in this Section, shall:
1. Provide an indication of whether electrical power is available at the control panel and if activation of the electronic brachytherapy source is possible;
 2. Provide an indication of whether x-rays are being produced;
 3. Provide a means for indicating electronic brachytherapy source potential and current;
 4. Provide the means for terminating an exposure at any time; and
 5. Include an access control (locking) device that will prevent unauthorized use of the electronic brachytherapy device.
- E. Timer.** A suitable irradiation control device (timer) shall be provided to terminate the irradiation after a pre-set time interval or integrated charge on a dosimeter-based monitor.
1. A timer shall be provided at the treatment control panel. The timer shall indicate the planned setting and the time elapsed or remaining;
 2. The timer shall not permit an exposure if set at zero;
 3. The timer shall be a cumulative device that activates with an indication of "BEAM-ON" that retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to reset the elapsed time indicator;
 4. The timer shall terminate irradiation when a pre-selected time has elapsed, if any dose monitoring system has not previously terminated irradiation.
 5. The timer shall permit setting of exposure times as short as 0.1 second; and
 6. The timer shall be accurate to within one percent of the selected value or 0.1 second, whichever is greater.
- F. Qualified Medical Physicist Support.**
1. The services of a Qualified Medical Physicist shall be required in facilities having electronic brachytherapy devices. The Qualified Medical Physicist shall be responsible for:
 - a. Evaluation of the output from the electronic brachytherapy source;
 - b. Generation of the necessary dosimetric information;
 - c. Supervision and review of treatment calculations prior to initial treatment of any treatment site;
 - d. Establishing the periodic and day-of-use quality assurance checks and reviewing the data from those checks as required in subsection (J);
 - e. Consultation with the authorized user in treatment planning, as needed; and
 - f. Performing calculations/assessments regarding patient treatments that may constitute a medical event.
2. If the Qualified Medical Physicist is not a full-time employee of the registrant, then the operating procedures required by subsection (G) shall also specifically address how the Qualified Medical Physicist is to be contacted for problems or emergencies, as well as the specific actions, if any, to be taken until the Qualified Medical Physicist can be contacted.
- G. Operating Procedures.**
1. Only individuals approved by the authorized user, Radiation Safety Officer, or Qualified Medical Physicist shall be present in the treatment room during treatment;
 2. Electronic brachytherapy devices shall not be made available for medical use unless the requirements of subsections (A), (H), and (I) have been met;
 3. The electronic brachytherapy device shall be inoperable, either by hardware or password, when unattended by qualified staff or service personnel;
 4. During operation, the electronic brachytherapy device operator shall monitor the position of all persons in the treatment room, and all persons entering the treatment room, to prevent entering persons from unshielded exposure from the treatment beam;
 5. If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used;
 6. Written procedures shall be developed, implemented, and maintained for responding to an abnormal situation. These procedures shall include:
 - a. Instructions for responding to equipment failures and the names of the individuals responsible for implementing corrective actions; and
 - b. The names and telephone numbers of the authorized users, the Qualified Medical Physicist, and the Radiation Safety Officer to be contacted if the device or console operates abnormally.
 7. A copy of the current operating and emergency procedures shall be physically located at the electronic brachytherapy device control console;
 8. Instructions shall be maintained with the electronic brachytherapy device control console to inform the operator of the names and telephone numbers of the authorized users, the Qualified Medical Physicist, and the Radiation Safety Officer to be contacted if the device or console operates abnormally; and
 9. The Radiation Safety Officer, or the Radiation Safety Officer's designee, and an authorized user shall be notified immediately if the patient has a medical emergency, suffers injury or dies. The Radiation Safety Officer or the Qualified Medical Physicist shall inform the manufacturer of the event.
- H. Safety Precautions for Electronic Brachytherapy Devices.**
1. Any person in the treatment room, other than the person being treated, shall wear personnel monitoring devices;
 2. An authorized user and a Qualified Medical Physicist shall be physically present during the initiation of all new patient treatments involving the electronic brachytherapy device;
 3. After the first treatment one of the following individuals shall be physically present during continuation of all patient treatments involving the electronic brachytherapy device:
 - a. A Qualified Medical Physicist, or
 - b. An authorized user, or
 - c. A certified therapy technologist (CTT) certified by the Arizona Medical Radiologic Technology Board of Examiners, under the direct supervision of an

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authorized user, who has been trained in the operation and emergency response for the electronic brachytherapy device;

4. When shielding is required by subsection (C)(4), surveys shall be conducted to ensure that the requirements of R12-1-408, R12-1-414, and R12-1-416 are met. Alternatively, a Qualified Medical Physicist shall designate shield locations sufficient to meet the requirements of R12-1-603(C) and R12-1-607(C) for any individual, other than the patient, in the treatment room; and
 5. All personnel in the treatment room are required to remain behind shielding during treatment. A Qualified Medical Physicist shall approve any deviation from this requirement and shall designate alternative radiation safety protocols, compatible with patient safety, to provide an equivalent degree of protection.
- I. Electronic Brachytherapy Source Calibration Measurements.**
1. Calibration of the electronic brachytherapy source output shall be performed by, or under the direct supervision of, a Qualified Medical Physicist. If the control console is integral to the electronic brachytherapy device, the required procedures shall be kept where the operator is located during electronic brachytherapy device operation;
 2. Calibration of the electronic brachytherapy source output shall be made for each electronic brachytherapy source, or after any repair affecting the x-ray beam generation, or when indicated by the electronic brachytherapy source quality assurance checks;
 3. Calibration of the electronic brachytherapy source output shall utilize a dosimetry system appropriate for the energy output of the unit and calibrated by the National Institute for Standards and Technology (NIST) or by an American Association of Physicists in Medicine (AAPM) Accredited Dosimetry Calibration Laboratory (ADCL). The calibration shall have been performed within the previous 24 months and after any servicing that may have affected system calibration;
 4. Calibration of the electronic brachytherapy source output shall include, as applicable, determination of:
 - a. The output within two percent of the expected value, if applicable, or determination of the output if there is no expected value;
 - b. Timer accuracy and linearity over the typical range of use;
 - c. Proper operation of back-up exposure control devices;
 - d. Evaluation that the relative dose distribution about the source is within five percent of that expected; and
 - e. Source positioning accuracy to within one millimeter within the applicator;
 5. Calibration of the x-ray source output required shall be in accordance with current published recommendations from a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of a calibration protocol published by a national professional association, the manufacturer's calibration protocol shall be followed.
 6. The registrant shall maintain a record of each calibration in an auditable form for the duration of the registration. The record shall include: the date of the calibration; the manufacturer's name, model number and serial number for the electronic brachytherapy device and a unique identifier for its electronic instrument or instruments brachytherapy source; the model numbers and serial numbers of the instrument or instruments used to calibrate the electronic brachytherapy device; and the name and signature of the Qualified Medical Physicist responsible for performing the calibration.
- J. Periodic and Day-of-Use Quality Assurance Checks for Electronic Brachytherapy Devices.**
1. Quality assurance checks shall be performed on each electronic brachytherapy device:
 - a. At the beginning of each day of use;
 - b. Each time the device is moved to a new room or site; and
 - c. After each x-ray tube installation.
 2. The registrant shall perform periodic quality assurance checks required in accordance with procedures established by the Qualified Medical Physicist;
 3. To satisfy the requirements of this subsection, radiation output quality assurance checks shall include at a minimum:
 - a. Verification that output of the electronic brachytherapy source falls within three percent of expected values, as appropriate for the device, as determined by:
 - i. Output as a function of time, or
 - ii. Output as a function of setting on a monitor chamber.
 - b. Verification of the consistency of the dose distribution to within three percent (or the manufacturer's or Qualified Medical Physicist's documented recommendation not to exceed five percent), observed at the source calibration required by subsection (I); and
 - c. Validation of the operation of positioning methods to ensure that the treatment dose exposes the intended location within one millimeter; and
 4. The registrant shall use a dosimetry system that has been intercompared within the previous 12 months with the dosimetry system described in this Section to make the quality assurance checks required in subsection (J)(3);
 5. The registrant shall review the results of each radiation output quality assurance check to ensure that:
 - a. An authorized user and Qualified Medical Physicist is immediately notified if any parameter is not within its acceptable tolerance, and the electronic brachytherapy device is not used until the Qualified Medical Physicist has determined that all parameters are within their acceptable tolerances;
 - b. If all radiation output quality assurance check parameters appear to be within their acceptable range, the acceptable quality assurance checklist shall be reviewed and signed by either the authorized user or Qualified Medical Physicist prior to the next patient use of the unit. In addition, the Qualified Medical Physicist shall review and sign the results of each radiation output quality assurance check at intervals not to exceed 30 days.
 6. To satisfy the requirements of subsection (J)(1), safety device quality assurance checks shall, at a minimum, assure:
 - a. Proper operation of radiation exposure indicator lights on the electronic brachytherapy device and on the control console;
 - b. Proper operation of viewing and intercom systems in each electronic brachytherapy facility, if applicable;
 - c. Proper operation of radiation monitors, if applicable;
 - d. The integrity of all cables, catheters or parts of the device that carry high voltages; and
 - e. Connecting guide tubes, transfer tubes, transfer-tube-applicator interfaces, and treatment spacers are

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- free from any defects that interfere with proper operation.
7. If the results of the safety device quality assurance checks required in subsection (J)(6) indicate the malfunction of any system, a registrant shall secure the control console in the OFF position and not use the electronic brachytherapy device except as may be necessary to repair, replace, or check the malfunctioning system.
 8. The registrant shall maintain a record of each quality assurance check required by this Section in a legible form for three years.
 - a. The record shall include the date of the quality assurance check; the manufacturer's name, model number and serial number for the electronic brachytherapy device; the name and signature of the individual who performed the periodic quality assurance check and the name and signature of the Qualified Medical Physicist who reviewed the quality assurance check;
 - b. For radiation output quality assurance checks required by subsection (J)(3), the record shall also include the unique identifier for the electronic brachytherapy source and the manufacturer's name; model number and serial number for the instrument or instruments used to measure the radiation output of the electronic brachytherapy device.
- K. Therapy-related Computer Systems.** The registrant shall perform acceptance testing on the treatment planning system of electronic brachytherapy-related computer systems in accordance with current published recommendations from a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of an acceptance testing protocol published by a national professional association, the manufacturer's acceptance testing protocol shall be followed.
1. Acceptance testing shall be performed by, or under the direct supervision of a Qualified Medical Physicist. At a minimum, the acceptance testing shall include, as applicable, verification of:
 - a. The source-specific input parameters required by the dose calculation algorithm;
 - b. The accuracy of dose, dwell time, and treatment time calculations at representative points;
 - c. The accuracy of isodose plots and graphic displays;
 - d. The accuracy of the software used to determine radiation source positions from radiographic images; and
 - e. If the treatment planning system is different from the treatment delivery system, the accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.
 2. The position indicators in the applicator shall be compared to the actual position of the source or planned dwell positions, as appropriate, at the time of commissioning.
 3. Prior to each patient treatment regimen, the parameters for the treatment shall be evaluated for correctness and approved by the authorized user and the Qualified Medical Physicist through means independent of that used for the determination of the parameters.
- L. Training for e-brachytherapy Authorized Users.**
1. The registrant for any therapeutic radiation machine subject to this Section shall require the authorized user to be a physician who is certified in:
 - a. Radiation oncology or therapeutic radiology by the American Board of Radiology or radiology (combined diagnostic and therapeutic radiology program) by the American Board of Radiology prior to 1976; or
 - b. Radiation oncology by the American Osteopathic Board of Radiology; or
 - c. Radiology, with specialization in radiotherapy, as a British "Fellow of the Faculty of Radiology" or "Fellow of the Royal College of Radiology"; or
 - d. Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or
 2. Is in the active practice of therapeutic radiology, and has completed 200 hours of instruction in basic radiation techniques applicable to the use of an external beam radiation therapy unit, 500 hours of supervised work experience, and a minimum of three years of supervised clinical experience.
 - a. To satisfy the requirement for instruction, the classroom and laboratory training shall include:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of ionization radiation; and
 - iv. Radiation biology.
 - b. To satisfy the requirement for supervised work experience, training shall be under the supervision of an authorized user and shall include:
 - i. Review of the full calibration measurements and periodic quality assurance checks;
 - ii. Evaluation of prepared treatment plans and calculation of treatment times or patient treatment settings or both;
 - iii. Using administrative controls to prevent medical events as described in R12-1-444;
 - iv. Implementing emergency procedures to be followed in the event of the abnormal operation of an external beam radiation therapy unit or console; and
 - v. Checking and using radiation survey meters.
 - c. To satisfy the requirement for a period of supervised clinical experience, training shall include one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user. The supervised clinical experience shall include:
 - i. Examining individuals and reviewing their case histories to determine their suitability for external beam radiation therapy treatment, and any limitations or contraindications or both;
 - ii. Selecting proper dose and how it is to be administered;
 - iii. Calculating the therapeutic radiation machine doses and collaborating with the authorized user in the review of patients' progress and consideration of the need to modify originally prescribed doses or treatment plans as warranted by patients' reaction to radiation or both; and
 - iv. Post-administration follow-up and review of case histories.
 3. Notwithstanding the requirements of this subsection, the registrant for any therapeutic radiation machine subject to this Section may also submit the training of the prospec-

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- tive authorized user physician for Agency review on a case-by-case basis if the training includes substantially equivalent training as that listed in subsection (L)(2) and the training includes dosimetry calculation training and experience.
4. A physician shall not act as an authorized user until such time as the physician's training has been reviewed and approved by the Agency.
- M.** Training for Qualified Medical Physicist. The registrant for any therapeutic radiation machine subject to this Section shall require the Qualified Medical Physicist to:
1. Be certified with the Agency, as a provider of radiation services in the area of calibration and compliance surveys of external beam radiation therapy units; and
 2. Be certified by the American Board of Radiology in:
 - a. Therapeutic radiological physics; or
 - b. Roentgen-ray and gamma-ray physics; or
 - c. X-ray and radium physics; or
 - d. Radiological physics; or
 3. Be certified by the American Board of Medical Physics in Radiation Oncology Physics; or
 4. Be certified by the Canadian College of Physicists in Medicine; or
 5. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university, and have completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of a Qualified Medical Physicist at a medical institution. This training and work experience shall be conducted in clinical radiation facilities that provide high-energy external beam radiation therapy (photons and electrons with energies greater than or equal to one MV/one MeV). To meet this requirement, the individual shall have performed the tasks listed in this subsection under the supervision of a Qualified Medical Physicist during the year of work experience.
- N.** Qualifications of Operators. Individuals who will be operating a therapeutic radiation machine for medical use shall be certified by the Agency as a CTT by the Arizona Medical Radiologic Technology Board of Examiners.
- O.** Additional training requirements.
1. A registrant shall provide instruction, initially and at least annually, to all individuals who operate the electronic brachytherapy device, as appropriate to the individual's assigned duties, in the operating procedures identified in subsection (G). If the interval between patients exceeds one year, retraining of the individuals shall be provided.
 2. In addition to the requirements of subsection (L) for therapeutic radiation machine authorized users and subsection (M) for Qualified Medical Physicists, these individuals shall also receive device-specific instruction initially from the manufacturer, and annually from either the manufacturer or other qualified trainer. The training shall be of a duration recommended by a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of any training protocol recommended by a national professional association, the manufacturer's training protocol shall be followed. The training shall include, but not be limited to:
 - a. Device-specific radiation safety requirements;
 - b. Device operation;
 - c. Clinical use for the types of use approved by the FDA;
 - d. Emergency procedures, including an emergency drill; and
 - e. The registrant's quality assurance program.
3. A registrant shall retain a record of individuals receiving manufacturers instruction for three years. The record shall include a list of the topics covered, the date of the instruction, the name or names of the attendee or attendees, and the name or names of the individual or individuals who provided the instruction.
- P.** Mobile Electronic Brachytherapy Service. A registrant providing mobile electronic brachytherapy service shall, at a minimum:
1. Check all survey instruments before medical use at each address of use or on each day of use, whichever is more restrictive;
 2. Account for the electronic brachytherapy x-ray tube in the electronic brachytherapy device before departure from the client's address; and
 3. Perform, at each location on each day of use, all of the required quality assurance checks specified in this Section to assure proper operation of the device.
- Q.** Medical events shall be reported to the Agency. For purposes of this Section "medical event" means a therapeutic radiation dose from a machine:
1. Delivered to the wrong patient;
 2. Delivered using the wrong mode of treatment;
 3. Delivered to the wrong treatment site; or
 4. Delivered in one week to the correct patient, using the correct mode, to the correct therapy site, but greater than 130 percent of the prescribed weekly dose; or
- R.** A therapeutic radiation dose from a machine with errors in the calibration, time of exposure, or treatment geometry that result in a calculated total treatment dose differing from the final, prescribed total treatment dose by more than 20 percent, except for treatments given in 1 to 3 fractions, in which case a difference of more than 10 percent constitutes a medical event.
- S.** Reports of therapy medical events:
1. Within 24 hours after discovery of a medical event, a registrant shall notify the Agency by telephone by speaking to an Agency staff member. The registrant shall also notify the referring physician of the affected patient and the patient or a responsible relative or guardian, unless the referring physician personally informs the registrant either that he or she will inform the patient, or that in his or her medical judgment, telling the patient or the patient's responsible relative or guardian would be harmful to one or the other, respectively. If the Agency staff member, referring physician, or the patient's responsible relative or guardian cannot be reached within 24 hours, the registrant shall notify them as soon as practicable. The registrant shall not delay medical care for the patient because of notification problems.
 2. Within 15 days following the verbal notification to the Agency, the registrant shall report, in writing, to the Agency and individuals notified under subsection (S)(1). The written report shall include the registrant's name, the referring physician's name, a brief description of the event, the effect on the patient, the action taken to prevent recurrence, whether the registrant informed the patient or the patient's responsible relative or guardian, and if not, why not. The report shall not include the patient's name or other information that could lead to identification of the patient.
 3. Each registrant shall maintain records of all medical events for Agency inspection. The records shall:

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- a. Contain the names of all individuals involved in the event, including:
 - i. The physician,
 - ii. The allied health personnel,
 - iii. The patient,
 - iv. The patient's referring physician,
 - v. The patient's identification number if one has been assigned,
 - vi. A brief description of the event,
 - vii. The effect on the patient, and
 - viii. The action taken to prevent recurrence.
- b. Be maintained for three years beyond the termination date of the affected registration.

Historical Note

New Section R12-1-611.01 made by final rulemaking at 20 A.A.R. 811, effective May 3, 2014 (Supp. 14-1).

R12-1-611.02. Other Use of Electronically-Produced Radiation to Deliver Superficial Therapeutic Radiation Dosage

A person shall not utilize any device which is designed to electrically generate a source of ionizing radiation to deliver superficial therapeutic radiation dosage, and which is not appropriately regulated under any existing category of therapeutic radiation machine, until:

1. The applicant or registrant has, at a minimum, provided the Agency with:
 - a. A detailed description of the device and its intended application or applications;
 - b. Facility design requirements, including shielding and access control;
 - c. Documentation of appropriate training for authorized user physician or physicians and qualified medical physicist or physicists;
 - d. Methodology for measurement of dosages to be administered to patients or human research subjects;
 - e. Documentation regarding calibration, maintenance, and repair of the device, as well as instruments and equipment necessary for radiation safety;
 - f. Radiation safety precautions and instructions; and
 - g. Other information requested by the Agency in its review of the application; and
2. The applicant or registrant has received written approval from the Agency to utilize the device in accordance with the regulations and specific conditions the Agency considers necessary for the medical use of the device; and
3. The applicant or registrant has submitted the application information and forms required by Article 2.
4. In addition to the requirements of this Section, a registrant using a device for x-ray radiation therapy shall meet the requirements of R12-1-611.01(Q), (R), and (S).

Historical Note

New Section R12-1-611.02 made by final rulemaking at 20 A.A.R. 811, effective May 3, 2014 (Supp. 14-1).

R12-1-612. Computed Tomography Systems**A. Definitions:**

1. "CT" means computed tomography.
2. "CT conditions of operation" means all selectable parameters governing the operation of a CT including nominal tomographic section thickness, and technique factors.
3. "CTDI" means computed tomography dose index, the integral of the dose profile along a line perpendicular to the tomographic plane divided by the product of the nominal tomographic thickness and the number of tomogram produced in a single scan.
4. "CTDI vol" means a value of a volume-weighted tomography dose index. The unit of the CTDI vol is Gray or

subunits of the Gray. The value of the CTDI vol for patient scan is used to trigger a notification when the value exceeds or will exceed a threshold value.

5. "CTN" means CT number, the number used to represent the x-ray attenuation associated with each elemental area of the CT image.
 6. "Dose profile" means the dose as a function of position along a line.
 7. "DLP" means the dose-length product. The DLP is the mathematical product of the CTDI vol and the length of the scan. The unit DLP is the Gray-cm of subunits of the Gray-cm. The DLP is used to trigger a notification when the value exceeds or will exceed a threshold value.
 8. "Elemental area" means the smallest area within a tomogram for which the x-ray attenuation properties of a body are depicted.
 9. "Multiple tomogram system" means a CT system that obtains x-ray transmissions data simultaneously during a single scan to produce more than one tomogram.
 10. "Nominal tomographic section thickness" means the full width at half-maximum of the sensitivity profile taken at the center of the cross section volume over which x-ray transmission data are collected.
 11. "Reference plane" means a plane that is displaced from and parallel to the tomographic plane.
 12. "Scan" means the complete process of collecting x-ray transmission data for the production of a tomogram. Data can be collected simultaneously during a single scan for the production of one or more tomograms.
- B. Facility:** A registrant shall ensure that a CT facility has:
1. An operable two-way communication system between the patient and the operator in each CT room.
 2. A viewing system that will allow the operator to continuously view the patient from the control panel during each examination. If the viewing system malfunctions the CT shall not be used until the viewing system is repaired.
- C. Equipment.** A registrant shall ensure that:
1. There is a means to terminate x-ray exposure automatically in the event of equipment failure by:
 - a. De-energizing the x-ray source, or
 - b. Shuttering the x-ray beam.
 2. The equipment shall provide the operator the ability to terminate the x-ray exposure at any time during the examination, provided the scan or series of scans is greater than one-half second duration.
 - a. If an operator terminates an x-ray exposure, the operator shall reset the CT conditions of operation before the initiation of another scan.
 - b. A visible signal shall indicate when an x-ray exposure has been terminated because of equipment failure.
 3. A means is provided to permit visual determination of the tomographic plane for a single tomogram system, or the location of a reference plane offset from a single tomogram or multiple tomogram system.
 - a. If a light source is used to satisfy this requirement, it shall provide illumination of the tomographic plane or reference plane under ambient light conditions.
 - b. The difference between the actual plane location and the indicated location of a tomographic plane or reference plane shall not exceed 5 millimeters.
 - c. The deviation of indicated scan increment versus actual increment shall not exceed plus or minus 1 millimeter with any mass from 0 to 100 kilograms resting on the patient support device.

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4. The control panel and gantry provides a visual indication, if x-rays are produced.
 5. Emergency buttons and switches are marked by function.
 6. Parameters of CT operation used during a patient examination are visible to the operator upon initiation of the scan. If an operational parameter is not adjustable by the operator, this subsection may be met by indicating on the control panel the parameter is not adjustable by the operator.
 7. Radiation exposure does not exceed 100 mR in one hour at one meter in any direction from the tube port of an operating CT.
 8. The angular position or positions where the maximum surface CTDI occurs is identified to allow for reproducible positioning of a CT dosimetry phantom, except in those cases where the x-ray tubes are designed to move, in which case, the maximum dose and associated tube position shall be evaluated according to manufacturer recommendations.
- D. Operating Procedures.** A registrant shall ensure that:
1. Operating procedures are available at the control panel, or by electronic means, regarding the operation of a CT and evaluation of a CT's operation.
 2. The operating procedures contain the following information:
 - a. A copy of the latest evaluation of the CT's operation, to include output for each CT procedure, performed by a qualified expert;
 - b. Instructions on the use of the CT performance phantom by the qualified expert, a schedule of quality control tests with the results of the most recent quality control test, and the allowable variations for the indicated parameters;
 - c. The distance in millimeters between the tomographic plane and the reference plane if a reference plane is used; and
 - d. A current technique chart that contains the information required in R12-1-607(D)(4)(a) for both adult and pediatric patients, as applicable, is available at the CT operating console, and a procedure for determining whether a CT has been performed according to instructions of a physician.
 - e. A written or electronic log that contains the information required in R12-1-607(D)(5) as well as an entry in the record of any displayed values for the exam from either a CTDI vol or DLP measurement for each patient exam completed on equipment manufactured on or after January 1, 2011.
 3. If the evaluation of the CT's operation or quality control test identifies a parameter exceeding the tolerance established by a qualified expert, the use of a CT for patient examination is limited to those uses established in written instructions from the qualified expert.
- E. Quality control tests.** A registrant shall have a written quality control test procedure, developed by a qualified expert, and ensure that the quality control test procedure:
1. Incorporates the use of a CT performance phantom that is compatible with an approved accreditation program approved by the Medicare Improvements for Patients and Providers Act (MIPPA) or supplied by or approved for use by the manufacturer of the unit.
 2. Is followed in the evaluation of the CT's operation, that the interval between tests does not exceed those set forth in the application for accreditation or quarterly if not accredited by an organization approved by (MIPPA), and that system conditions are specified by the registrant's qualified expert.
- F. Evaluation of a CT's operation.** A registrant shall ensure that:
1. The evaluation of a CT's operation is performed by, or under the direct supervision of, a qualified expert who is physically present at the facility during the evaluation of the CT's operation.
 2. The evaluation of a CT's operation:
 - a. Is performed before initial patient use and annually (within two months of the annual due date) and after any change or replacement of components that could, in the opinion of the qualified expert, cause a change in radiation output; and
 - b. Shall measure the CTDI in a dosimetry phantom along the two axes specified in subsection (F)(4)(b).
 - c. A complete evaluation of a CT unit, performed before the annual due date shall clearly list if the new survey changes the annual due date for the unit. It shall be clearly noted on all documentation for the next three years that the survey has established a new annual due date based upon the date of the new survey.
 3. The evaluation of a CT's x-ray system is performed with a calibrated dosimetry system that:
 - a. Has been calibrated using a method that is traceable to the National Institute of Standards and Technology (NIST), and
 - b. Has been calibrated within the preceding two years.
 4. CT dosimetry phantoms used in determining radiation output are compatible with an approved accreditation program approved by (MIPPA) or supplied by or approved for use by the manufacturer of the unit; and
 - a. Are constructed in a way that the parameters used to image the most commonly imaged parts of the human body are evaluated; and
 - b. At a minimum, provide means for placement of a dosimeter along the axis of rotation and along a line parallel to the axis of rotation 1.0 centimeter from the outer surface and within the phantom.
 5. Any effects on the measured dose due to the removal of phantom material to accommodate the dosimeter are accounted for in the reported data or included in the statement of maximum deviation for the measured values.
- G. CT units designated for simulator use, veterinary use, dental use, podiatry use, and non-diagnostic use on humans** are exempt from the annual requirements in subsections (E) and (F) provided an initial evaluation is conducted by a qualified expert and the output does not exceed the manufacturers specified limits. The initial evaluation shall be maintained for Agency review.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former

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Section R12-1-612 repealed, new Section R12-1-612 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R.1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-613. Veterinary Medicine Radiographic Systems**A. Equipment.** A registrant shall ensure that:

1. Before January 2, 1996, the total filtration permanently in the useful beam is not less than 1.5 millimeters aluminum-equivalent for equipment operating at up to 70 kVp and 2.0 millimeters aluminum-equivalent for equipment operating in excess of 70 kVp;
2. A device is provided to terminate the exposure after a preset time or exposure;
3. Each radiographic system has a "dead-man" exposure switch with an electrical cord of sufficient length to allow the operator to stand at least 1.82 meters (six feet) away from the useful beam during x-ray exposures.

B. Procedures: A registrant shall ensure that:

1. Unless required to restrain an animal, the operator stands at least 1.82 meters (6 feet) away from the useful beam and the animal during a radiographic exposure;
2. An individual other than the operator is not in the x-ray room or area while an exposure is being made, unless the individual's assistance is required;
3. If possible, an animal is held in position during an x-ray exposure using mechanical supporting or restraining devices;
4. An individual holding an animal during an x-ray exposure is:
 - a. Wearing protective gloves and an apron of not less than 0.5 millimeter lead equivalent or positioned behind a whole-body protective barrier;
 - b. Wearing required personnel monitoring devices; and
 - c. Positioned so that no part of the person's body, except hands and arms, will be struck by the useful beam;
5. If an individual holds or supports an animal or a film during an x-ray exposure, the name of the individual is recorded in an x-ray log that contains the animal's name, the type of x-ray procedure, the number of exposures, and the date of the procedure; and
6. As a condition of employment an individual is not required to routinely hold or support animals, or hold film during radiation exposures.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsection (B) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-614. Mammography Systems**A. Equipment.** A registrant shall ensure that:

1. Only radiation machines specifically designed for mammographic examinations are used;
2. The film processor used in the registrant's facility is maintained in accordance with the film processor's and film manufacturer's recommendations;

3. Each facility has an image development system onsite unless the Agency has approved an alternate system;
4. If used with screen-film image receptors, and the contribution to filtration made by the compression device is included, the useful beam has a half-value layer between the values of: "measured kVp/100 and measured kVp/100 + L millimeters" of aluminum equivalent, where L = 0.12 for Mo/Mo, L= 0.19 for Mo/Rh, L=0.22 for Rh/Rh, L=0.30 for W/Rh target filtration combinations and L= 0.33 for other target filtration combinations not otherwise specified.
5. The combination of focal spot size, source-to-image distance and magnification produces a radiograph with a resolution of at least 12 line pairs per millimeter at an object-to-image receptor distance of 4.5 centimeters; or the standards in Table 3-3 of the American Association of Physicists in Medicine (AAPM), Report No. 29, Equipment Requirements and Quality Control for Mammography, August 1990, published by the American Institute of Physics, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747 (This report is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. The report is available online at: <http://www.aapm.org/pubs/reports>; print copies may be purchased from Medical Physics Publishing, 4513 Vernon Blvd., Madison, WI 53705; toll free at (800) 442-5778.);
6. The compression device used with the mammographic unit, unless specifically manufactured otherwise, is parallel to the imaging plane, not varying at any spot by more than 1 centimeter;
7. The mammographic x-ray system with initial power drive:
 - a. Has compression paddles compatible with each size of image receptor;
 - b. Is capable of compressing the breast with a force of at least 25 pounds, but not more than 45 pounds, and maintaining the compression for at least three seconds; and
 - c. Is used in a manner so that the chest wall edge of the compression device is aligned just beyond the chest wall edge of the image receptor so that the chest wall edge of the compression device does not appear on the image receptor;
8. A mammographic x-ray system using screen-film image receptors has:
 - a. At least two different sizes of moving anti-scatter grids, including one for each size of image receptor utilized; and
 - b. Automatic exposure control;
9. All mammographic x-ray systems indicate or provide a means of determining, the mAs resulting from each exposure made with automatic exposure control;
10. The collimation provided limits the useful beam to the image receptor so that the beam does not extend beyond any edge of the image receptor at any designated source to image receptor distance by more than 2 percent of the source to image receptor distance;
11. The accuracy of the indicated kVp is within plus or minus 2kVp;
12. Mammographic x-ray systems operating with automatic exposure control are capable of maintaining a film density within plus or minus 0.15 optical density units over the clinical range of kVp used, for a breast having an equivalent phantom thickness from 2 to 6 centimeters. If a technique chart is used, the operator shall maintain the

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- film density within plus or minus 0.15 optical density units of the mean optical density.
13. At a kVp of 28, the mammographic x-ray system is capable of generating at least 2.0 $\mu\text{C}/\text{kg}/\text{mAs}$ (8mR/mAs) and at least 200 $\mu\text{C}/\text{kg}/\text{second}$ (800 mR/second), measured at a point 4.5 centimeters above the surface of the patient support device when the Source-image receptor distance is at its maximum;
 14. Screens are not used for mammography if one or more areas of greater than 1 centimeter squared of poor screen-film contact are seen when tested, using a 40 mesh screen test;
 15. Mammographic image quality meets the minimum mammography film standards for phantom performance in Mammography Quality Control Manual, 1999 edition, published by the American College of Radiology (ACR). (This manual is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. The manual is available from ACR Publication Sales, P.O. Box 533, Annapolis Junction, MD 20701; toll free at (800) 227-7762; e-mail at: acr@brightkey.net).
 16. The mean glandular dose for one cranio-caudal view of a 4.2 centimeter (1.8 inch) compressed breast, composed of 50 percent adipose and 50 percent glandular tissue, does not exceed 300 millirads (3 milligray); and
 17. A radiologic physicist who meets the requirements in R12-1-615(A)(1)(c) evaluates the operation of a mammographic x-ray system:
 - a. When first installed and annually thereafter,
 - b. Following any major change in equipment or replacement of parts, and
 - c. When quality assurance tests indicate calibration is necessary.
- B. Operating Procedures.** A registrant shall ensure that:
1. Each mammographic facility has a quality assurance program, and that the quality assurance program includes performance and documentation of the quality control tests in subsection (B)(2), conducted at the required time intervals. Test results shall fall within the specified limits in subsection (B)(2) or the registrant shall take corrective action and maintain documentation that the results are within specified limits before performing or processing any further examinations using the system that failed. A radiologic physicist, as defined in R12-1-615(A)(1)(c), shall review the program and make any recommendations necessary for the facility to comply with this Section;
 2. The quality assurance program meets federal requirements (Contained in 21 CFR 900.12(d)(1), and (e)(1) through (e)(10), revised April 1, 2013, incorporated by reference and available under R12-1-101. This incorporated material contains no future editions or amendments.); or the following requirements:
 - a. Daily sensitometric and densitometric evaluation of the image processing system demonstrates that Base + Fog < +0.03 optical density of operating level, Mid Density \pm 0.15 optical density of operating level, and Density Difference \pm 0.15 optical density of operating level;
 - b. Weekly phantom image quality evaluations demonstrate the visualization of at least four fibers, three speck groups, and three masses with a background of greater than 1.40 optical density, not varying by 0.20 optical density of operating level;
 - c. Monthly technique chart evaluations demonstrate updates for all equipment changes and that all examinations are being performed according to a physicist's density control recommendation;
 - d. Quarterly fixer retention evaluations demonstrate an acceptable limit of less than or equal to 5.0 micrograms per square centimeter;
 - e. Quarterly repeat analysis demonstrates an acceptable limit of less than 2 percent increase in repeats;
 - f. Semiannual darkroom fog evaluations meet the limit of less than or equal to 0.05 optical density of fog, using the two minute exposed film method;
 - g. Semiannual screen film contact evaluations meet the limit of less than one area of poor contact of 1 centimeter squared, using a 40 mesh screen on all clinically-used screens;
 - h. Semiannual automatic compression force evaluations meet the limit of greater than or equal to 25 pounds (111 Newtons) and less than 45 pounds (200 Newtons);
 - i. A survey shall be conducted annually and whenever indicated for installation, major repairs, parts replacement, or as deemed necessary by a qualified expert when quality control test results indicate a survey is necessary; the survey shall include all of the following tests:
 - i. Automatic exposure control performance and thickness response;
 - ii. Accuracy and reproducibility of kVp;
 - iii. System resolution;
 - iv. Breast entrance air kerma and automatic exposure control reproducibility;
 - v. Average glandular dose;
 - vi. X-ray field, light field, and image receptor alignment;
 - vii. Compression paddle alignment;
 - viii. Uniformity of screen speed;
 - ix. System artifacts;
 - x. Radiation output;
 - xi. Decompression;
 - xii. Beam quality and half value layer;
 - j. For systems with image receptor modalities other than screen film:
 - i. The quality assurance and quality control program for the acquisition system meets or exceeds the recommendations by the manufacturer; and
 - ii. The quality assurance and quality control program for the printer meets or exceeds the recommendations by the image receptor manufacturer. In the absence of recommendations by the image receptor manufacturer for the specified printer, the quality control and assurance program meets or exceeds the recommendations of the printer manufacturer; and
 - iii. The quality assurance and quality control program for the interpretation monitors meets or exceeds the recommendations by the image receptor manufacturer. In the absence of recommendations by the image receptor manufacturer for the specified monitor or monitors, the quality control and assurance program meets or exceeds the recommendations of the interpretation monitor or monitors manufacturer; and
 - k. The registrant maintains records documenting compliance with the provisions in this subsection for three years from the date each requirement is met.

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The records shall be made available for Agency inspection.

C. Mammographic films and reports.

1. A registrant shall maintain films and reports for a minimum of five years. In those cases where no subsequent mammographic procedures are performed, the registrant shall maintain films and associated reports for 10 years. If the mammographic facility is closed, the registrant shall make arrangements for storage of the films and associated reports for five years after the closure; and
2. A registrant shall make films and reports available for comparison upon request for temporary or permanent transfer to other mammographic facilities.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-615. Mammography Personnel

A. Personnel.

1. Each registrant shall require personnel who perform mammography, which includes the production, processing, and interpretation of mammograms and related quality assurance activities, to meet the following requirements:
 - a. An interpreting physician shall meet federal requirements (Contained in 21 CFR 900.12(a)(1), revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 - i. Be licensed under A.R.S. Title 32, Chapters 13 or 17;
 - ii. Have initially completed 40 hours of medical education credits in mammography;
 - iii. Be certified by the American Board of Radiology or the American Osteopathic Board of Radiology or meet the requirements of the mammography quality standards act regulations for quality standards of interpreting physicians;
 - iv. Have interpreted or reviewed an average of 300 mammograms per year during the preceding two years or have completed a radiology residency that included mammogram image interpretation in the preceding two years;
 - v. Have completed 15 hours of continuing medical education credits in mammography during the preceding three years; and
 - vi. Have received at least eight hours of training specific to each mammographic modality before engaging in independent interpretation.
 - b. A mammographic technologist shall meet federal requirements (Contained in 21 CFR 900.12(a)(2), revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 - i. Possess a valid mammographic technologist certificate issued by the Medical Radiologic Technology Board of Examiners, as required in

- ii. Have performed at least 200 mammographic examinations in the preceding two years;
- iii. Have completed 15 hours of continuing medical education credits in mammography during the preceding three years; and
- iv. Have received at least eight hours of training specific to each mammographic modality to be used by the technologist in performing mammographic examinations.

- c. A radiologic physicist shall meet federal requirements (Contained in 21 CFR 900.12(a)(3), revised April 1, 2013, incorporated by reference and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 - i. Be certified by the American Board of Radiology, American Board of Medical Physics, or the American Board of Health Physics;
 - ii. Possess documentation of state approval;
 - iii. Hold a master's degree or higher in a physical science;
 - iv. Have, upon initial employment as a radiologic physicist, experience conducting, at least one mammographic facility survey and evaluating at least 10 mammographic units;
 - v. Have, after completing the experience requirements in subsection (A)(1)(c)(iv), continuing experience surveying two mammographic facilities and evaluating six mammographic units during the preceding two years;
 - vi. Have completed 15 hours of continuing medical education credits in mammography during the three preceding years;
 - vii. Have received at least eight hours of training specific to any modality surveyed; and
2. Each registrant shall maintain records documenting the requirements in subsection (A)(1) for three years from the date the requirement is met and make the records available for Agency inspection.

- B. Radiologic physicists shall apply for and renew their certification on agency approved forms. In addition to Agency supplied forms, applicants must also submit documentation showing education, mammography specific training, education, and board certification. Upon renewal, an applicant must submit documentation showing current continuing education requirements are met.**

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.C. 4302, effective November 14, 2003 (Supp. 03-3). New Section R12-1-615 made by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

Appendix A. Information Submitted to the Agency According to R12-1-604(A)(3)(c)

- A.** Name and address of the applicant and, if applicable, the name and address of any person within this state that is authorized to act on behalf of the applicant;
- B.** Disease or conditions to be diagnosed using the proposed x-ray examination;
- C.** A detailed description of each x-ray examination that will be used in the diagnosis;

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- D. A description of the population to be examined in the screening program, using characteristics such as age, sex, physical condition, and other descriptive information;
- E. An evaluation of any known alternative diagnostic modalities not involving ionizing radiation that could achieve the same diagnosis as a screening program and why these modalities have not been chosen;
- F. An evaluation by a qualified expert of the x-ray equipment used in the screening program, which demonstrates that the x-ray equipment satisfies the requirements of this Article.
- G. A description of the quality control program;
- H. A copy of the technique chart for the planned x-ray examination;
- I. The qualifications of each individual who will be operating the x-ray equipment;
- J. The qualifications of the individual who will be supervising each operator of the x-ray equipment;
- K. The name and address of the individual who will interpret each radiographic image;
- L. A description of the planned procedures for advising a screened individual and the screened individual's physician of the screening procedure results, and the need for further medical care, and
- M. A description of the procedures for retention or disposition of the radiographic images and other records pertaining to the x-ray examination.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

Appendix B. Repealed**Historical Note**

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

ARTICLE 7. MEDICAL USES OF RADIOACTIVE MATERIAL**R12-1-701. License Required**

- A. A person may manufacture, produce, acquire, receive, possess, prepare, use, or transfer radioactive material for medical use only in accordance with a specific license issued by the Agency, the NRC, or another Agreement State, or as allowed in subsection (B)(1) or (B)(2).
- B. A specific license is not needed for an individual who:
 1. Receives, possesses, uses, or transfers radioactive material in accordance with the rules in this Chapter under the supervision of an authorized user as provided in R12-1-706, unless prohibited by license condition; or
 2. Prepares unsealed radioactive material for medical use in accordance with the rules in this Chapter under the supervision of an authorized nuclear pharmacist or authorized user.

Historical Note

Former Rule Section G.1. Former Section R12-1-701 repealed, new Section R12-1-701 adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (07-1).

R12-1-702. Definitions

"Authorized medical physicist" means an individual who meets the requirements in R12-1-711. For purposes of ensuring that personnel

are adequately trained, an authorized medical physicist is a "qualified expert" as defined in Article 1.

"Authorized nuclear pharmacist" means a pharmacist who meets the requirements in R12-1-712.

"Authorized user" means a physician, dentist, or podiatrist who meets the requirements in R12-1-719, R12-1-721, R12-1-723, R12-1-727, R12-1-728, or R12-1-744.

"Brachytherapy" means a method of radiation therapy in which a sealed source or group of sealed sources is utilized to deliver beta or gamma radiation at a distance of up to a few centimeters, by surface, intracavitary, intraluminal, or interstitial application.

"CT" means computerized tomography.

"High dose rate afterloading brachytherapy" means the treating of human disease using the radiation from a radioactive sealed source containing more than 1 curie of radioactive material. The radioactive material is introduced into a patient's body using a device that allows the therapist to indirectly handle the radiation source during the treatment. For purposes of the requirements in this Article "pulse dose rate afterloading brachytherapy" is included in this definition.

"Human research subject" means an individual who is or becomes a participant in research overseen by an IRB, either as a recipient of the test article or as a control. A subject may be either a healthy human, in research overseen by the RDRC, or a patient.

"Institutional review board" (IRB) is defined in R12-1-704(B).

"Manual brachytherapy" means a type of brachytherapy in which the brachytherapy sources (e.g., seeds, ribbons) are manually placed topically on or inserted either into the body cavities that are in close proximity to a treatment site or directly into the tissue volume.

"Medical event" means an event that meets the criteria in R12-1-745.

"Medical institution" means an organization in which several medical disciplines are practiced.

"Medical use" means the intentional internal or external administration of radioactive material, or the radiation from it, to an individual under the supervision of an authorized user.

"Nuclear cardiology" means the diagnosis of cardiac disease using radiopharmaceuticals.

"PET" means positron emission tomography.

"Physically present" means that a supervising medical professional is in proximity to the patient during a radiation therapy procedure so that immediate emergency orders can be communicated to ancillary staff, should the occasion arise.

"Prescribed dosage" means the specified activity or range of activity of unsealed radioactive material as documented:

In a written directive; or

In accordance with the directions of the authorized user for procedures performed in accordance with the uses described in Exhibit A.

"Prescribed dose" means:

For gamma stereotactic radiosurgery, the total dose as documented in the written directive;

For teletherapy, the total dose and dose per fraction as documented in the written directive;

For manual brachytherapy, either the total source strength and exposure time or the total dose, as documented in the written directive; or

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For remote brachytherapy afterloaders, the total dose and dose per fraction as documented in the written directive.

“Radiation Safety Officer” (RSO) for purposes of this Article, and in addition to the definition in Article 1 means an individual who:

- Meets the requirements in R12-1-710, or
- Is identified as a radiation safety officer on:
 - A specific medical use license issued by the NRC or Agreement State; or
 - A medical use permit issued by a NRC master material license.

“Radioactive drug” is defined in 21 CFR 310.3(c) and includes a “radioactive biological product” as defined in 21 CFR 600.3, April 1, 2006, both of which are incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, DC 20408, and on file with the Agency. These incorporated materials contain no future editions or amendments.

“Radioactive Drug Research Committee” (RDRC) means the committee established by the licensee to review all basic research involving the administration of a radioactive drug to human research subjects, taken from 21 CFR 361.1, April 1, 2006, which is incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, DC 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments. Research is considered basic research if it is done for the purpose of advancing scientific knowledge, which includes basic information regarding the metabolism (including kinetics, distributions, dosimetry, and localization) of a radioactive drug or regarding human physiology, pathophysiology, or biochemistry. Basic research is not intended for immediate therapeutic or diagnostic purposes and is not intended to determine the safety and effectiveness of a radioactive drug in humans.

“Radiopharmaceutical” means any drug that exhibits spontaneous disintegration of unstable nuclei with the emission of nuclear particles or photons and includes any nonradioactive reagent kit or nuclide generator that is intended to be used in the preparation of any such substance. For purposes of this Article radiopharmaceutical is equivalent to radioactive drug.

“Remote afterloading brachytherapy device” means a device used in radiation therapy that allows the authorized user to insert, from a remote location, a radiation source into an applicator that has been previously inserted in an individual requiring treatment.

“Sealed Source and Device Registry” means the national registry that contains all the registration certificates, generated by both NRC and the Agreement States, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for the product.

“Stereotactic radiosurgery” means the use of external radiation in conjunction with a stereotactic guidance device to very precisely deliver a dose.

“Teletherapy” means therapeutic irradiation in which the sealed source of radiation is at a distance from the body.

“Therapeutic dosage” means a dosage of unsealed radioactive material that is intended to deliver a radiation dose to a patient or human research subject for palliative or curative treatment.

“Therapeutic dose” means a radiation dose delivered from a source containing radioactive material to a patient or human research subject for palliative or curative treatment.

“Treatment site” means the anatomical description of the tissue intended to receive a radiation dose, as described in a written directive.

“Unit dosage” means a dosage prepared for medical use for administration as a single dosage to a patient or human research subject without any further manipulation of the dosage after it is initially prepared.

“Written directive” means an authorized user’s written order for the administration of radioactive material or radiation from radioactive material to a specific patient or human research subject, as specified in R12-1-707.

Historical Note

Former Rule Section G.2; Former Section R12-1-702 repealed, new Section R12-1-702 adopted effective June 30, 1977 (Supp. 77-3). Former Section R121-702 renumbered and amended as Section R12-1-703, new Section R12-1-702 adopted effective December 20, 1985 (Supp. 85-6). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-703. License for Medical Use of Radioactive Material

- A.** In addition to the requirements set forth in R12-1-309, the Agency shall issue a specific license for medical use of radioactive material if:
1. The applicant has appointed a radiation safety committee, meeting the requirements in R12-1-705, that will oversee the use of licensed material throughout the licensee’s facility and associated radiation safety program;
 2. The applicant possesses facilities for the clinical care of patients or human research subjects; and
 3. The individual designated on the application as an authorized user has met the training and experience requirements in R12-1-719, R12-1-721, R12-1-723, R12-1-727, R12-1-728, or R12-1-744.
- B.** Specific licenses to individual authorized users for medical use of radioactive material:
1. The Agency shall approve an application by a prospective individual authorized user or prospective group of authorized users for a specific license governing the medical use of radioactive material if:
 - a. The applicant satisfies the general requirements in R12-1-309;
 - b. The application is for use in the applicant’s practice at an office outside of a medical institution;
 - c. The applicant meets the training and experience requirements in subsection (A)(3); and
 - d. The applicant has a radiation safety committee, if the criteria in R12-1-705 are applicable and a RDRC, if the use is basic research involving humans.
 2. The Agency shall not approve an application by a prospective authorized user or group of prospective authorized users for a specific license to receive, possess, or use radioactive material on the premises of a medical institution unless:
 - a. The use of radioactive material is limited to:
 - i. The administration of radiopharmaceuticals for diagnostic or therapeutic purposes;
 - ii. The performance of diagnostic studies on patients or human research subjects to whom a radiopharmaceutical has been administered;

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- iii. The performance of in vitro diagnostic studies; or
 - iv. The calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation, or diagnostic instrumentation;
 - b. The authorized user brings the radioactive material and removes the radioactive material upon departure; and
 - c. The medical institution does not hold a radioactive materials license under subsection (A).
- C. Specific licenses for certain groups of medical uses of radioactive material:
1. The Agency shall approve an application for a specific license under subsections (A) or (B), for any medical use or uses of radioactive material specified in Groups 100 through 1,000, in Exhibit A of this Article, for all of the materials within each group requested in the application if:
 - a. The applicant satisfies the requirements of subsections (A) and (B);
 - b. Each person involved in the preparation and use of the radioactive material is an authorized user, an authorized nuclear pharmacist, or certified as a nuclear medicine technologist by the Medical Radiologic Technology Board of Examiners (MRTBE);
 - c. The applicant's radiation detection and measuring instrumentation is adequate for conducting the procedures involved in the authorized uses selected from Group 100 through Group 1,000; and
 - d. The applicant's radiation safety operating procedures are adequate for handling and disposal of the radioactive material involved in the authorized uses selected from Group 100 through Group 1,000.
 2. Any licensee who is authorized to use radioactive material:
 - a. In unsealed form under Groups 100, 200, 300 or 1,000 listed in Exhibit A of this Article, shall do so using radiopharmaceuticals prepared in accordance with R12-1-311(I); or
 - b. In sealed source form under Groups 400, 500, 600, or 1,000 listed in Exhibit A of this Article, shall do so using sealed sources that have been manufactured and distributed in accordance with R12-1-311(K);
 - c. In any form under group 1,000 listed in Exhibit A of this Article, shall do so using sealed and unsealed sources that have been manufactured and distributed in accordance with the specific license issued by the Agency.
 3. Any licensee who is licensed according to subsection (C)(1), for one or more of the medical use groups in Exhibit A also is authorized to use radioactive material under the general license in R12-1-306(E) for the specified in vitro uses without filing Form ARRA-9 as required by R12-1-306(E)(2); provided, that the licensee is subject to the other provisions of R12-1-306(E).
- D. In addition to the other license application requirements in this Section, each applicant shall include in the radiation safety program required under subsection (A)(1) a system for ensuring that each syringe and vial that contains unsealed radioactive material is labeled in accordance with R12-1-431(D).

Historical Note

Former Rule Section G.3; Former Section R12-1-703 repealed, new Section R12-1-703 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-703

renumbered and amended as Section R12-1-704, former Section R12-1-702 renumbered and amended as Section R12-1-703 effective December 20, 1985 (Supp. 85-6).

Section repealed and new Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-704. Provisions for the Protection of Human Research Subjects

- A. A licensee may conduct basic research involving human research subjects and research involving patients receiving investigational new drugs or devices if the licensee only uses the radioactive material specified on the license for the uses authorized on the license.
- B. If research is conducted, funded, supported, or regulated by a federal agency that has implemented the federal Policy for Protection of Human Research Subjects (45 CFR 46, June 23, 2005, which is incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, DC 20408, on file with the Agency, and contains no future editions or amendments), the licensee shall:
1. Obtain review and approval of the research from an Institutional Review Board (IRB); and
 2. Obtain informed consent from the human research subject.
- C. If research will not be conducted, funded, supported, or regulated by a federal agency that has implemented the federal policy in subsection (B), a medical licensee shall, before conducting research, apply for and receive a specific amendment to its use license. The amendment request shall include a written commitment that the licensee will, before conducting research:
1. Obtain review and approval of the research from an IRB, as defined and described in the federal policy; and
 2. Obtain informed consent from the human research subject.
- D. Before conducting the research described in subsection (A) the licensee shall apply to the Agency for and receive a specific amendment to its medical use license. The amendment request shall include a written commitment that the licensee will, before conducting research:
1. Obtain any review and approval required by this Section, and
 2. Obtain informed consent from the human research subject if applicable.
- E. Nothing in this Section relieves a licensee from complying with the other requirements in this Article.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Former Section R12-1-703 renumbered and amended as Section R12-1-704 effective December 20, 1985 (Supp. 85-6).

Section repealed and new Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made

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by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-705. Authority and Responsibilities for the Radiation Protection Program

- A. A licensee's management shall appoint in writing a radiation safety officer, who agrees, in writing, to be responsible for implementing the radiation protection program. The licensee, through the RSO, shall ensure that radiation safety activities are being performed in accordance with licensee-approved procedures and regulatory requirements. Each time the RSO is changed, the licensee shall provide to the Agency within 30 days an amendment request and a copy of the correspondence between the licensee's management and the candidate, accepting the position of RSO.
- B. Licensees that are authorized for two or more different types of uses of radioactive material listed in Groups 300, 400, 600, and 1,000, or two or more types of units under group 600 or 1,000, shall establish a Radiation Safety Committee (RSC) to oversee all uses of radioactive material permitted by the license. At a minimum, the RSC shall include an authorized user of each type of use permitted by the license, the RSO, a representative of the nursing service, and a representative of management who is neither an authorized user nor a RSO.
- C. If a licensee or applicant is not a health care institution and is unable to meet the RSC membership requirements in subsection (B), the licensee or applicant may request an exemption in accordance with A.R.S. § 30-654(B)(13). The request for exemption shall be made to the Agency in writing and list the reasons why the health care institution is unable to meet the requirements.
- D. A licensee shall ensure that the RSC meets, at a minimum, on an annual basis and maintain the RSC meeting minutes for Agency review for three years after the date of the RSC meeting.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-706. Supervision

- A. For purposes of this rule, "supervision" means the exercise of control over or direction of the use of radioactive material in the practice of medicine by an authorized user named on a radioactive material license. Supervision does not require a supervising physician's constant physical presence if the supervising physician can be easily contacted by radio, telephone, or telecommunication.
- B. A physician may use radioactive material if the person is licensed by the Arizona Medical Board or Board of Osteopathic Examiners in Medicine and Surgery and is listed as an authorized user on the Arizona radioactive material license under which the radioactive material is obtained.
- C. A licensee that permits the receipt, possession, use, or transfer of radioactive material by an individual under the supervision of an authorized user, shall:
1. Instruct the supervised individual in the licensee's written radiation protection procedures, written directive procedures, rules, and license conditions with respect to the use of radioactive material; and
 2. Require the supervised individual to follow the instructions of the supervising authorized user for medical uses of radioactive material, written radiation protection procedures established by the licensee, written directive pro-

cedures, rules, and license conditions with respect to the medical use of radioactive material.

- D. A licensee that permits the preparation of radioactive material for medical use by an individual who is supervised by an authorized nuclear pharmacist or a physician, who is an authorized user, shall:
1. Instruct the supervised individual in the preparation of radioactive material for medical use, as appropriate to that individual's involvement with radioactive material; and
 2. Require the supervised individual to follow the instructions of the supervising authorized user or authorized nuclear pharmacist regarding the preparation of radioactive material for medical use, written radiation protection procedures established by the licensee, the rules, and license conditions.
- E. A licensee that permits supervised activities under subsections (C) and (D) is responsible for the acts and omissions of the supervised individual.
- F. A limited-service nuclear pharmacy licensee shall dispense radiopharmaceuticals only to a physician listed as an authorized user on a valid radioactive material license issued by the Agency, an Agreement State, or the NRC. For purposes of this rule "limited-service nuclear pharmacy" is defined in R4-23-110.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-707. Written Directives

- A. A licensee shall ensure that a written directive is dated and signed by an authorized user before the administration of I-131 sodium iodide greater than 1.11 MBq (30 microcuries (μCi)), any therapeutic dosage of unsealed radioactive material or any therapeutic dose of radiation from radioactive material. If, because of the emergent nature of the patient's condition, a delay in order to provide a written directive would jeopardize the patient's health, an oral directive is acceptable. The information contained in the oral directive shall be documented as soon as possible in writing in the patient's record. A written directive shall be prepared within 48 hours of the oral directive.
- B. A written directive shall contain the patient or human research subject's name and the following information:
1. For any administration of quantities greater than 1.11 MBq (30 μCi) of sodium iodide I-131: the dosage;
 2. For an administration of a therapeutic dosage of unsealed radioactive material other than sodium iodide I-131: the radiopharmaceutical, dosage, and route of administration;
 3. For gamma stereotactic radiosurgery: the total dose, treatment site, and values for the target coordinate settings per treatment for each anatomically distinct treatment site;
 4. For teletherapy: the total dose, dose per fraction, number of fractions, and treatment site;
 5. For high dose-rate remote afterloading brachytherapy: the radionuclide, treatment site, dose per fraction, number of fractions, and total dose; or
 6. For all other brachytherapy, including low, medium, and pulsed dose rate remote afterloaders:
 - a. Before implantation: treatment site, the radionuclide, and dose; and

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- b. After implantation but before completion of the procedure: the radionuclide, treatment site, number of sources, and total source strength and exposure time (or the total dose).
- C. The licensee shall retain a copy of the written directive for three years after creation of the record.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-708. Procedures for Administrations Requiring a Written Directive

For any administration requiring a written directive, the licensee shall develop, implement, and maintain written procedures to provide high confidence that:

1. The patient's or human research subject's identity is verified before each administration; and
2. Each administration is in accordance with the written directive.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-709. Sealed Sources or Devices for Medical Use

A licensee may only use:

1. Sealed sources, including teletherapy sources, or devices manufactured, labeled, packaged, and distributed in accordance with a license issued under Article 3 of this Chapter, equivalent regulations of the NRC or equivalent requirements of an Agreement State; or
2. Sealed sources or devices noncommercially transferred from another medical licensee; or
3. Teletherapy sources manufactured and distributed in accordance with a license issued by the Agency, the NRC, or another Agreement State.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-710. Radiation Safety Officer Training

A. A licensee shall require an individual fulfilling the responsibilities of the radiation safety officer, described in R12-1-705, to be an individual who:

1. Is certified by a specialty board whose certification process includes all of the requirements in subsection (A)(2) and whose certification has been recognized by the Agency, NRC, or an Agreement State. To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Meet the following minimum requirements:
 - i. Hold a bachelor's or graduate degree from an accredited college or university in physical science or engineering or biological science with a minimum of 20 college credits in physical science;
 - ii. Have five or more years of professional experience in health physics (graduate training may be substituted for no more than two years of the

- required experience) including at least three years in applied health physics; and
- iii. Pass an examination administered by diplomates of the specialty board, which evaluates knowledge and competence in radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology, and radiation dosimetry; or
- b. Meet the following minimum requirements:
 - i. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
 - ii. Have two years of full-time practical training and/or supervised experience in medical physics;
 - (1) Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the Commission or an Agreement State; or
 - (2) In clinical nuclear medicine facilities providing diagnostic and/or therapeutic services under the direction of physicians who meet the requirements for authorized users qualified under section R12-1-710(B), R12-1-721, or R12-1-723;
 - iii. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical diagnostic radiological or nuclear medicine physics and in radiation safety; or
2. Has completed a structured educational program consisting of both:
 - a. 200 hours of didactic and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Radiation biology; and
 - v. Radiation dosimetry; and
 - b. One year of full-time radiation safety experience under the supervision of the individual identified as the radiation safety officer on an Agency, NRC, or an Agreement State license or permit issued by a NRC master material licensee that authorizes similar type(s) of use(s) of radioactive material involving the following:
 - i. Shipping, receiving, and performing related radiation surveys;
 - ii. Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides;
 - iii. Securing and controlling radioactive material;
 - iv. Using administrative controls to avoid mistakes in the administration of radioactive material;
 - v. Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures;
 - vi. Using emergency procedures to control radioactive material; and
 - vii. Disposing of radioactive material; or
 - c. Has obtained written certification, signed by a precursor radiation safety officer, that the individual has

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satisfactorily completed the requirements in subsection (A)(2)(a) and (A)(2)(b) and has achieved a level of radiation safety knowledge sufficient to function independently as a radiation safety officer for a medical use licensee; or

3. Is an authorized user, authorized medical physicist, or authorized nuclear pharmacist identified on the licensee's license and has experience with the radiation safety aspects of similar types of use of radioactive material for which the individual has radiation safety officer responsibilities.

B. Exceptions.

1. An individual identified as a radiation safety officer on an Agency, a NRC, or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsections (A)(1) through (A)(3).
2. A physician, dentist, or podiatrist identified as an authorized user for the medical use of radioactive material on a license issued by the Agency, NRC, or Agreement State, a permit issued by a NRC master material licensee, a permit issued by an Agency, NRC, or Agreement State broad scope licensee, or a permit issued by a NRC master material license broad scope permittee before the effective date of these rules need not comply with the training requirements in this Article.

- C. The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

- D. Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R.

1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13

A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final

rulemaking at 20 A.A.R. 324, effective March 8, 2014

(Supp. 14-1).

R12-1-711. Authorized Medical Physicist Training

- A. A licensee shall require an authorized medical physicist to be an individual who:

1. Is certified by a specialty board whose certification process includes all of the training and experience requirements in subsection (A)(3)(b) and (A)(3)(c) and whose certification has been recognized by the Agency, NRC or an Agreement State; or
2. Training requirements.
 - a. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
 - b. Have two years of full-time practical training and/or supervised experience in medical physics:
 - i. Under the supervision of a medical physicist who is certified in medical physics by a spe-

cialty board recognized by the NRC or an Agreement State; or

- ii. In clinical radiation facilities providing high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services under the direction of physicians who meet the requirements for authorized users in R12-1-710, R12-1-719, R12-1-721, R12-1-723, R12-1-727, R12-1-728, or R12-1-744; and

- c. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical radiation therapy, radiation safety, calibration, quality assurance, and treatment planning for external beam therapy, brachytherapy, and stereotactic radiosurgery; or

3. Training requirements alternative.

- a. Holds a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university; and has completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of an individual who meets the requirements for an authorized medical physicist for the type(s) of use for which the individual is seeking authorization. This training and work experience must be conducted in clinical radiation facilities that provide high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services and must include:

- i. Performing sealed source leak tests and inventories;
- ii. Performing decay corrections;
- iii. Performing full calibration and periodic spot checks of external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and
- iv. Conducting radiation surveys around external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and

- b. Has obtained written attestation that the individual has satisfactorily completed the requirements in subsection (A)(3)(c) and (A)(2)(a) and (A)(2)(b) and (A)(3)(c), or (A)(3)(a) and (A)(3)(c); and has achieved a level of competency sufficient to function independently as an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status. The written attestation must be signed by a preceptor authorized medical physicist who meets the requirements in section, or equivalent Agreement State requirements for an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status; and

- c. Has training for the type(s) of use for which authorization is sought that includes hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system. This training requirement may be satisfied by satisfactorily completing either a training program provided by the vendor or by training supervised by an authorized medical physicist authorized for the type(s) of

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use for which the individual is seeking authorization.

- B. Exceptions. An individual identified as a teletherapy or medical physicist on an Agency, a NRC, or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsection (A).
 - C. The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
 - D. Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.
- b. Supervised practical experience in a nuclear pharmacy involving:
 - i. Shipping, receiving, and performing related radiation surveys;
 - ii. Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides;
 - iii. Calculating, assaying, and safely preparing dosages for patients or human research subjects;
 - iv. Using administrative controls to avoid medical events in the administration of radioactive material; and
 - v. Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures; and

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-712. Authorized Nuclear Pharmacist Training

- A. A licensee shall require the authorized nuclear pharmacist to be a pharmacist who:
 - 1. Is certified as a nuclear pharmacist by a specialty board whose certification process has been recognized by the Agency, NRC, or an Agreement State. To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Have graduated from a pharmacy program accredited by the American Council on Pharmaceutical Education (ACPE) or have passed the Foreign Pharmacy Graduate Examination Committee (FPGEC) examination;
 - b. Hold a current, active license to practice pharmacy in Arizona;
 - c. Provide evidence of having acquired at least 4000 hours of training/experience in nuclear pharmacy practice. Academic training may be substituted for no more than 2000 hours of the required training and experience; and
 - d. Pass an examination in nuclear pharmacy administered by diplomates of the specialty board, that assesses knowledge and competency in procurement, compounding, quality assurance, dispensing, distribution, health and safety, radiation safety, provision of information and consultation, monitoring patient outcomes, research and development; or
 - 2. Has completed 700 hours in a structured educational program consisting of both:
 - a. 200 hours of classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and

- 3. Has obtained written attestation, signed by a preceptor authorized nuclear pharmacist, that the individual has satisfactorily completed the requirements in subsection (A)(2) and has achieved a level of competency sufficient to function independently as an authorized nuclear pharmacist.
- B. Exceptions. An individual identified as a nuclear pharmacist on an Agency, a NRC or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsections (A)(1) through (A)(3).
- C. The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- D. Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-713. Determination of Prescribed Dosages, and Possession, Use, and Calibration of Instruments

- A. A licensee shall determine and record the activity of each dosage before medical use.
- B. For a unit dosage, this determination shall be made by:
 - 1. Direct measurement of radioactivity; or
 - 2. Decay correction, based on the activity or activity concentration determined by:
 - a. A manufacturer or preparer licensed under R12-1-311 or equivalent NRC or Agreement State requirements; or
 - b. An Agency, NRC, or Agreement State licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an

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- Investigational New Drug (IND) protocol accepted by FDA or;
- c. A PET radioactive drug producer licensed under R12-1-311 or equivalent NRC or Agreement State requirements.
- C. For other than unit dosages, this determination shall be made by:
1. Direct measurement of radioactivity;
 2. Combination of measurement of radioactivity and mathematical calculations; or
 3. Combination of volumetric measurements and mathematical calculations based on the measurement made by a manufacturer or preparer licensed under R12-1-311, or equivalent NRC or Agreement State requirements.
- D. Unless otherwise directed by the authorized user, a licensee may not use a dosage if the dosage does not fall within the prescribed dosage range or if the dosage differs from the prescribed dosage by more than 20 percent.
- E. A licensee shall retain a record of the dosage determination required by this Section for Agency inspection for three years.
- F. For direct measurements performed in accordance with subsection (B)(1), a licensee shall possess and use instrumentation to measure the activity of the dosage before it is administered to each patient or human research subject.
- G. A licensee shall calibrate the instrumentation required in subsection (F) in accordance with nationally recognized standards, the manufacturer's instructions, or the following procedures.
1. The procedures that may be followed are:
 - a. Check each dose calibrator for constancy with a dedicated check source at the beginning of each day of use;
 - b. Test each dose calibrator for accuracy upon installation and at least annually thereafter by assaying at least two sealed sources containing different radionuclides whose activity the manufacturer has determined within 5 percent of its stated activity, whose activity is at least 10 microcuries for radium-226 and 50 microcuries for any other photon-emitting radionuclide, and at least one of which has a principal photon energy between 100 keV and 500 keV;
 - c. Test each dose calibrator for linearity upon installation and at least quarterly thereafter over a range from the highest dosage that will be administered to a patient or human research subject to 1.1 megabecquerels (30 microcuries);
 - d. Test each dose calibrator for geometry dependence upon installation over the range of volumes and volume configurations for which it will be used. The licensee shall keep a record of this test for the duration of the use of the dose calibrator.
 - e. Perform appropriate checks and tests required by this Section following adjustment or repair of the dose calibrator; and
 - f. Mathematically correct dosage readings for any geometry or linearity error that exceeds 10 percent if the dosage is greater than 10 microcuries and shall repair or replace the dose calibrator if the accuracy or constancy error exceeds 10 percent.
 2. A licensee shall maintain the dose calibrator in accordance with this subsection, even though the dose calibrator is only used to "verify" a dosage prepared by a supplier authorized in subsection (B)(2).
 3. A licensee shall maintain on file for Agency review nationally recognized standards or manufacturer's instructions used to maintain a dose calibrator and meet the requirements of subsection (G).
- H. A licensee shall calibrate the survey instruments before first use, annually, and following a repair that affects the calibration. A licensee shall:
1. Calibrate all scales with readings up to 10 mSv (1000 mrem) per hour with a radiation source;
 2. Calibrate two separated readings on each scale or decade that will be used to show compliance; and
 3. Conspicuously note on the instrument the date of calibration.
- I. A licensee may not use survey instruments if the difference between the indicated exposure rate and the calculated exposure rate is more than 20 percent.
- J. A licensee shall retain records of instrument calibration for three years following the calibration.
- Historical Note**
- New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).
- R12-1-714. Authorization for Calibration, Transmission, and Reference Sources**
- Any person authorized by R12-1-703 for medical use of radioactive material may receive, possess, and use any of the following radioactive material for check, calibration, transmission, and reference use.
1. Sealed sources, not exceeding 1.11 GBq (30 mCi) each, manufactured and distributed by a person licensed under Article 3 of this Chapter or equivalent NRC or Agreement State regulations.
 2. Sealed sources, not exceeding 1.11 GBq (30 mCi) each, redistributed by a licensee authorized to redistribute the sealed sources manufactured and distributed by a person licensed under Article 3 of this Chapter, providing the redistributed sealed sources are in the original packaging and shielding and are accompanied by the manufacturer's approved instructions.
 3. Any radioactive material with a half-life not longer than 120 days in individual amounts not to exceed 0.56 GBq (15 mCi).
 4. Any radioactive material with a half-life longer than 120 days in individual amounts not to exceed the smaller of 7.4 MBq (200 µCi) or 1000 times the quantities in Article 4, Appendix B of this Chapter.
 5. Technetium-99m in amounts as needed.
 6. A licensee is limited to five sources of radiation authorized under subsections (1) through (3), unless otherwise specified in the licensee's radioactive material license.
- Historical Note**
- New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-715. Requirements for Possession of Sealed Sources and Brachytherapy Sources

- A. A licensee in possession of any sealed source or brachytherapy source shall follow the radiation safety and handling instructions supplied by the manufacturer.
- B. A licensee in possession of a sealed source shall test the source for leakage in accordance with R12-1-417.
- C. A licensee in possession of sealed sources or brachytherapy sources, except for gamma stereotactic radiosurgery sources, shall conduct a physical inventory every six months of all sources in its possession. During the period of time between the inventories, the licensee shall add each acquired sealed source to the inventory record and remove from the inventory record each source that leaves the licensee's control.
- D. A licensee shall document the inventories conducted under subsection (C) and maintain inventory records in accordance with R12-1-450.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-716. Surveys of Ambient Radiation Exposure Rate, Surveys for Contamination, and PET Radiation Exposure Concerns

- A. In addition to the surveys required in Article 4 of this Chapter, a licensee shall survey with a radiation detection survey instrument at the end of each day of use all areas where unsealed radioactive material, requiring a written directive, is prepared for use or administered. In areas of routine use, that are to be released for unrestricted use, a licensee shall perform a survey of the area using an instrument appropriate for detecting contamination before releasing the area for unrestricted use.
- B. A licensee shall obtain the services of a person, experienced in the principles of radiation protection and installation design, to design a PET facility and perform a radiation survey when the facility is ready for patient imaging. The licensee shall provide a copy of the installation radiation survey to the Agency within 30 days of imaging the first patient.
- C. The licensee shall use engineering controls or shield each PET use area with protective barriers necessary to comply with the radiation exposure limits in R12-1-408 and R12-1-416.
 - 1. At the time of application for a new license or amendment to an existing license, and before imaging of the first patient, the licensee shall provide to the Agency a copy of the installation report signed by the contractor who installed the shielding material recommended by a person meeting the requirements in subsection (B) and a copy of the installation radiation survey required in subsection (B).
 - 2. The licensee shall perform shielding calculations in accordance with *AAPM Task Group 108: PET and PET/CT Shielding Requirements*, in Medical Physics, Vol. 33, No. 1, January 2006, which is incorporated by reference, published by the American Association of Physicists in Medicine, One Physics Ellipse, College Park, MD 20740, and on file with the Agency. This incorporation by reference contains no future editions or amendments. In lieu of these procedures, the licensee may use equivalent calculations approved by the Agency.
- D. As part of the annual ALARA review required in R12-1-407, the licensee shall document a review of the PET patient workload and associated change, if any, in public exposure resulting from the installed facility shielding and other public radiation exposure controls in use at the time of the review.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-717. Release of Individuals Containing Radioactive Material or Implants Containing Radioactive Material

- A. A licensee may authorize the release from its control of any individual who has been administered unsealed radioactive material or implants containing radioactive material, if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 millisieverts (0.5 rem).
- B. A licensee shall provide the released individual, or the individual's parent or guardian, with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 1 millisievert (0.1 rem). If the total effective dose equivalent to a nursing infant or child could exceed 1 millisievert (0.1 rem) assuming there were no interruption of breast-feeding, the instructions shall also include:
 1. Guidance on the interruption or discontinuation of breast-feeding; and
 2. Information on the potential consequences, if any, of failure to follow the guidance.
- C. A licensee shall maintain a record of the basis for authorizing the release of an individual and instructions provided to a breast-feeding female for three years from the date of the administration performed under subsection (A). Nothing in this rule relieves the licensee from the personnel exposure requirements in Article 4.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-718. Mobile Medical Service

- A. A licensee providing mobile medical service shall:
 1. Obtain a letter signed by the management of each client for which services are rendered that permits the use of radioactive material at the client's address and clearly delineates the authority and responsibility of the licensee and the client;
 2. Check instruments used to measure the activity of unsealed radioactive material for proper function before medical use at each client's address or on each day of use, whichever is more frequent. At a minimum, the check for proper function required by this subsection shall include a constancy check;
 3. Check survey instruments for proper operation with a dedicated check source before use at each client's address; and
 4. Before leaving a client's address, survey all areas of use to ensure compliance with the requirements in Article 4 of this Chapter.
- B. A mobile medical service may not have radioactive material delivered from the manufacturer or the distributor to the client unless the client has a license allowing its possession. If appli-

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cable, radioactive material delivered to the client shall be received and handled in conformance with the client's license.

- C. A licensee providing mobile medical services shall retain the letter required in subsection (A)(1) and the record of each survey required in subsection (A)(4) for three years from the date of the survey.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-719. Training for Uptake, Dilution, and Excretion Studies

- A. Except as provided in R12-1-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 100 to be a physician who:

1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(3). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Complete 60 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies as described in subsection (A)(3); and
 - b. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or
2. Is an authorized user under R12-1-721, R12-1-723, NRC, or equivalent Agreement State requirements; or
3. Has completed 60 hours of training and experience, including a minimum of eight hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies. The training and experience must include:

- a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
- b. Work experience, under the supervision of an authorized user who meets the requirements in this Article, NRC, or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
 - iii. Calculating, measuring, and safely preparing patient or human research subject dosages;

- iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
 - v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
 - vi. Administering dosages of radioactive drugs to patients or human research subjects; and
- c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements of R12-1-710, R12-1-719, R12-1-721, or R12-1-723, NRC, or equivalent Agreement State requirements; that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(3) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article.

- B. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- C. Individuals who, under R12-1-710(B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-720. Permissible Molybdenum-99, Strontium-82, and Strontium-85 Concentrations

- A. A licensee may not administer to humans a radiopharmaceutical that contains more than 0.15 kilobecquerel of molybdenum-99 per megabecquerel of technetium-99m (0.15 microcurie of molybdenum-99 per millicurie of technetium-99m) or, more than 0.02 kilobecquerel of strontium-82 per megabecquerel of rubidium-82 chloride injection (0.02 microcurie of strontium-82 per millicurie of rubidium-82 chloride); or more than 0.2 kilobecquerel of strontium-85 per megabecquerel of rubidium-82 chloride injection (0.2 microcurie of strontium-85 per millicurie of rubidium-82).
- B. A licensee that uses molybdenum-99/technetium-99m generators for preparing a technetium-99m radiopharmaceutical shall measure the molybdenum-99 concentration of the first eluate after receipt of a generator to demonstrate compliance with subsection (A).
- C. A licensee that uses a strontium-82/rubidium-82 generator for preparing a rubidium-82 radiopharmaceutical shall, before the first patient use of the day, measure the concentration of radionuclides strontium-82 and strontium-85 to demonstrate compliance with subsection (A).
- D. A licensee shall maintain a record of each molybdenum-99 concentration measurement or strontium-82 and strontium-85 concentrations measurements for three years following completion of the measurement.

Historical Note

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 13 A.A.R.

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1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-721. Training for Imaging and Localization Studies Not Requiring a Written Directive

- A. Except as provided in R12-1-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 200 to be a physician who:
1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(3). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for imaging and localization studies as described in subsection (3); and
 - b. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or
 2. Is an authorized user under this Chapter and R12-1-723, NRC, or equivalent Agreement State requirements; or
 3. Has completed 700 hours of training and experience, including a minimum of 80 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for imaging and localization studies. The training and experience must include:
 - a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. Work experience, under the supervision of an authorized user who meets the requirements in R12-1-710, R12-1-721, or R12-1-723 and R12-1-721(A)(3)(b)(vii), NRC, or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
 - iii. Calculating, measuring, and safely preparing patient or human research subject dosages;
 - iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
 - v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
 - vi. Administering dosages of radioactive drugs to patients or human research subjects; and
 - vii. Eluting generator systems appropriate for preparation of radioactive drugs for imaging

and localization studies, measuring and testing the elate for radionuclide purity, and processing the elate with reagent kits to prepare labeled radioactive drugs; and,

- c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements as an authorized user for Exhibit A group 200 nuclides, NRC, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(3) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article.

- B. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-722. Safety Instruction and Precautions for Use of Unsealed Radioactive Material Requiring a Written Directive

- A. A licensee shall provide radiation safety instruction, initially and at least annually, for all personnel caring for the patient or human research subject receiving radiopharmaceutical therapy and hospitalized for compliance with R12-1-717. To satisfy this requirement, the instruction shall describe the licensee's procedures for:
1. Patient or human research subject control;
 2. Visitor control;
 3. Contamination control;
 4. Waste control; and
- B. For each patient or human research subject who cannot be released under R12-1-717, a licensee shall:
1. Quarter the patient or the human research subject in a private room with a private sanitary facility;
 2. Visibly post the patient's or the human research subject's room with a "Radioactive Materials" sign.
 3. Note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or the human research subject's room; and
 4. Monitor material and items removed from the patient's or the human research subject's room to determine that their radioactivity cannot be distinguished from the natural background radiation level with a radiation detection survey instrument set on its most sensitive scale and with no interposed shielding, or handle the material and items as radioactive waste.
- C. A licensee shall notify the radiation safety officer, or his or her designee, and the authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.
- D. A licensee shall retain records of instruction and safety procedures performed under this rule for three years from the date of the activity.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-723. Training for Use of Unsealed Radioactive Material Requiring a Written Directive, Including Treatment of Hyperthyroidism, and Treatment of Thyroid Carcinoma

- A. Except as provided in R12-1-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 300 to be a physician who:
1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(2). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Successfully complete residency training in a radiation therapy or nuclear medicine training program or a program in a related medical specialty. These residency training programs must include 700 hours of training and experience as described in (A)(2). Eligible training programs must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and Surgeons of Canada, or the Committee on Post-Graduate Training of the American Osteopathic Association; and
 - b. Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, and quality assurance, and clinical use of unsealed radioactive material for which a written directive is required; or
 2. Has completed 700 hours of training and experience, including a minimum of 200 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material requiring a written directive. The training and experience must include:
 - a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. Work experience, under the supervision of an authorized user who meets the requirements in this Article, NRC, or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
 - iii. Calculating, measuring, and safely preparing patient or human research subject dosages;
 - iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
 - v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures;
 - vi. Administering dosages of radioactive drugs to patients or human research subjects involving a minimum of three cases in each of the following categories for which the individual is requesting authorized user status:
 - (1) Oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131, for which a written directive is required (Experience with at least three cases in Category (A)(2)(b)(vi)(2) also satisfies this requirement);
 - (2) Oral administration of greater than 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131;
 - (3) Parenteral administration of any beta emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required; and/or
 - (4) Parenteral administration of any other radionuclide, for which a written directive is required; and
 - c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements as an authorized user for Exhibit A group 300 nuclides, NRC, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(2) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article. The written attestation must be signed by a preceptor authorized user who meets the requirements in this Section, NRC, or equivalent Agreement State requirements. The preceptor authorized user, who meets the requirements in subsection (B) must have experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status.
- B.** Except as provided in R12-1-710, a licensee shall require an authorized user of iodine-131 for the oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries) to be a physician who has completed the training requirements in 10 CFR 35.392, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** Except as provided in R12-1-710, a licensee shall require an authorized user of iodine-131 for the oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries) to be a physician who has completed the training requirements in 10 CFR 35.394, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- D.** Except as provided in R12-1-710, a licensee shall require an authorized user for the parenteral administration of unsealed radioactive material requiring a written directive to be a physician who has completed the training requirements in 10 CFR 35.396, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- E.** The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

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Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-724. Surveys after Brachytherapy Source Implant and Removal; Accountability

- A. A licensee shall make a survey to locate and account for all sources that have not been implanted immediately after implanting sources in a patient or a human research subject.
- B. A licensee shall make a survey of the patient or the human research subject with a radiation detection survey instrument immediately after removing the last temporary implant source to confirm that all sources have been removed.
- C. A licensee shall maintain accountability at all times for all sources in storage or use.
- D. A licensee shall return brachytherapy sources to a secure storage area as soon as possible after removing sources from a patient or a human research subject.
- E. A licensee shall record the procedures performed in subsections (A) through (D) and retain the records for three years following completion of the record.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-725. Safety Instructions and Precautions for Brachytherapy Patients that Cannot be Released Under R12-1-717

- A. In addition to the training requirements in Article 10, a licensee shall provide radiation safety instruction, initially and at least annually, to personnel caring for patients or human research subjects who are receiving brachytherapy and cannot be released under R12-1-717. To satisfy this requirement, the instruction shall be commensurate with the duties of the personnel and include the:
 1. Size and appearance of the brachytherapy sources;
 2. Safe handling and shielding instructions;
 3. Patient or human research subject control;
 4. Visitor control, including both:
 - a. Routine visitation of hospitalized individuals in accordance with Article 4 of this Chapter,
 - b. Visitation authorized in accordance with Article 4 of this Chapter, and
 5. Notification of the radiation safety officer, or his or her designee, and an authorized user if the patient or the human research subject has a medical emergency or dies.
- B. For each patient or human research subject who is receiving brachytherapy and cannot be released under R12-1-717, a licensee shall:
 1. Not quarter the patient or the human research subject in the same room as an individual who is not receiving brachytherapy;
 2. Visibly post the patient's or human research subject's room with a "Radioactive Materials" sign; and
 3. Note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or human research subject's room.
- C. A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source:
 1. Dislodged from the patient; and
 2. Lodged within the patient following removal of the source applicators.
- D. A licensee shall notify the radiation safety officer, or the RSO's designee, and an authorized user as soon as possible if

the patient or human research subject has a medical emergency or dies.

- E. A licensee shall record the instructions given under subsection (A) and retain the records for three years after recording the instructions.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-726. Calibration Measurements of Brachytherapy Sources, Decay of Sources Used for Ophthalmic Treatments, and Computerized Treatment Planning Systems

- A. Before the first medical use of a brachytherapy source after the effective date of this rule, a licensee shall have:
 1. Determined the source output or activity using a dosimetry system that meets the requirements of R12-1-733(A);
 2. Determined source positioning accuracy within applicators; and
 3. Used published protocols currently accepted by nationally recognized bodies to meet the requirements of subsections (A)(1) and (A)(2).
- B. A licensee may use measurements provided by the source manufacturer or by a calibration laboratory accredited by the American Association of Physicists in Medicine that are made in accordance with subsection (A).
- C. A licensee shall mathematically correct the outputs or activities determined in subsection (A) for physical decay at intervals consistent with one percent physical decay.
- D. Only an authorized medical physicist shall calculate the activity of each strontium-90 source that is used to determine the treatment times for ophthalmic treatments. The decay shall be based on the activity determined under subsection (A).
- E. A licensee shall perform acceptance testing on the treatment planning system of therapy-related computer systems in accordance with published protocols accepted by nationally recognized bodies. At a minimum, the acceptance testing shall include, as applicable, verification of:
 1. The source-specific input parameters required by the dose calculation algorithm;
 2. The accuracy of dose, dwell time, and treatment time calculations at representative points;
 3. The accuracy of isodose plots and graphic displays; and
 4. The accuracy of the software used to determine sealed source positions from radiographic images.
- F. A licensee shall retain records of each source activity determination and ophthalmic source decay correction, and documentation of the acceptance testing protocol required under subsection (E) for three years after the date of the procedure required in subsections (A) and (D), and for the records created in conjunction with subsection (E), the record shall be maintained for three years from the last date of the protocol's use.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-727. Training for Use of Manual Brachytherapy Sources and Training for the Use of Strontium-90 Sources for Treatment of Ophthalmic Disease

- A. Except as provided in R12-1-710, the licensee shall require an authorized user of a manual brachytherapy source for the uses authorized under this Article to be a physician who:
 1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(2). To have its certification process recog-

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nized, a specialty board shall require all candidates for certification to:

- a. Successfully complete a minimum of three years of residency training in a radiation oncology program approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and
 - b. Pass an examination, administered by diplomates of the specialty board, that tests knowledge and competence in radiation safety, radionuclide handling, treatment planning, quality assurance, and clinical use of manual brachytherapy; or
2. Has completed a structured educational program in basic radionuclide handling techniques applicable to the use of manual brachytherapy sources that includes:
 - a. 200 hours of classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Radiation biology; and
 - b. 500 hours of work experience, under the supervision of an authorized user who meets the requirements in this Section, or equivalent NRC or Agreement State requirements at a medical institution, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Checking survey meters for proper operation;
 - iii. Preparing, implanting, and removing brachytherapy sources;
 - iv. Maintaining running inventories of material on hand;
 - v. Using administrative controls to prevent a medical event involving the use of radioactive material;
 - vi. Using emergency procedures to control radioactive material; and
 - c. Has completed three years of supervised clinical experience in radiation oncology, under an authorized user who meets the requirements in this Section, or equivalent Agreement State requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-doctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by subsection (A)(2)(b); and
 - d. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in this Section, NRC, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(2) and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under Exhibit A of this Article.
- B. Except as provided in R12-1-710, a licensee shall require an authorized user of strontium-90 for ophthalmic radiotherapy to

be a physician who has completed the training requirements in 10 CFR 35.491, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

- C. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-728. Training for Use of Sealed Sources for Diagnosis

- A. Except as provided in R12-1-710, the licensee shall require the authorized user of a diagnostic sealed source for use in a device authorized under Group 500 to be a physician, dentist, or podiatrist who is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsections (A)(1) and (2); or
 1. Has completed eight hours of classroom and laboratory training in basic radionuclide handling techniques specifically applicable to the use of the device. The training must include:
 - a. Radiation physics and instrumentation;
 - b. Radiation protection;
 - c. Mathematics pertaining to the use and measurement of radioactivity;
 - d. Radiation biology; and
 2. Has completed training in the use of the device for the uses requested.
- B. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-729. Surveys of Patients and Human Research Subjects Treated with a Remote Afterloader Unit

- A. Before releasing a patient or a human research subject from licensee control, a licensee shall survey the patient or the human research subject and the remote afterloader unit with a portable radiation detection survey instrument to confirm that each source has been removed from the patient or human research subject and returned to the safe shielded position.
- B. A licensee shall make records of these surveys conducted under subsection (A) and retain them for three years from the date of each survey.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-730. Installation, Maintenance, Adjustment, and Repair of an Afterloader Unit, Teletherapy Unit, or Gamma Stereotactic Radiosurgery Unit

- A. Only a person specifically licensed by the Agency, NRC, or an Agreement State shall install, maintain, adjust, or repair a remote afterloader unit, teletherapy unit, or gamma stereotac-

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tic radiosurgery unit that involves work on any source shielding, the source's driving unit, or other electronic or mechanical component that could expose a source, reduce the shielding around a source, or compromise the radiation safety of a unit or a source.

- B. Except for low dose-rate remote afterloader units, only a person specifically licensed by the Agency, NRC, or an Agreement State shall install, replace, relocate, or remove a sealed source or source contained in other remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units.
- C. For a low dose-rate remote afterloader unit, only a person specifically licensed by the Agency, NRC, or an Agreement State or an authorized medical physicist shall install, replace, relocate, or remove a sealed source contained in the unit.
- D. A licensee shall retain a record of the installation, maintenance, adjustment, and repair of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units for three years from the completion date of the activity listed in this Section.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-731. Safety Procedures and Instructions for Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units

- A. A licensee shall:
 1. Secure the unit, the console, the console keys, and the treatment room when not in use or unattended;
 2. Permit only individuals approved by the authorized user, radiation safety officer, or authorized medical physicist to be present in the treatment room during treatment with a source;
 3. Prevent dual operation of more than one radiation producing device in a treatment room if applicable; and
 4. Develop, implement, and maintain written procedures for responding to an abnormal situation when the operator is unable to place a source in the shielded position, or remove the patient or human research subject from the radiation field with controls from outside the treatment room. These procedures shall include:
 - a. Instructions for responding to equipment failures and the names of the individuals responsible for implementing corrective actions;
 - b. The process for restricting access to and posting of the treatment area to minimize the risk of inadvertent exposure; and
 - c. The names and telephone numbers of the authorized users, the authorized medical physicist, and the radiation safety officer to be contacted if the unit or console operates abnormally.
- B. A licensee shall post instructions at the unit console to inform the operator of:
 1. The location of the procedures required by subsection (A)(4); and
 2. The names and telephone numbers of the authorized users, the authorized medical physicist, and the radiation safety officer to be contacted if the unit or console operates abnormally.
- C. A licensee shall provide instruction, initially and at least annually, to all individuals who operate the unit, as appropriate to the individual's assigned duties, in:
 1. The procedures identified in subsection (A)(4); and
 2. The operating procedures for the unit.

- D. A licensee shall ensure that operators, authorized medical physicists, and authorized users participate in drills of the emergency procedures, initially and at least annually.
- E. A licensee shall retain a record of individuals receiving instruction required by subsection (C) for three years from the date of the instruction.
- F. A licensee shall maintain a copy of the procedures required by subsections (A)(4) and (C)(2) for Agency review. The copy shall be maintained for three years beyond the termination date of the activities for which the procedures were written.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-732. Safety Precautions for Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units

- A. A licensee shall control access at each entrance to a treatment room.
- B. A licensee shall equip each entrance to the treatment room with an electrical interlock system that will:
 1. Prevent the operator from initiating the treatment cycle unless each treatment room entrance door is closed;
 2. Cause each source to be shielded when an entrance door is opened; and
 3. Prevent any source from being exposed following an interlock interruption until all treatment room entrance doors are closed and the source's on-off control is reset at the console.
- C. A licensee shall require any individual entering the treatment room to assure, through the use of appropriate radiation monitors, that radiation levels have returned to ambient levels.
- D. Except for low-dose remote afterloader units, a licensee shall construct or equip each treatment room with viewing and intercom systems to permit continuous observation of the patient or the human research subject from the treatment console during irradiation.
- E. For licensed activities where sources are placed within the patient's or human research subject's body, a licensee shall only conduct treatments which allow for expeditious removal of a decoupled or jammed source.
- F. In addition to the requirements specified in subsections (A) through (E), a licensee shall:
 1. For medium dose-rate and pulsed dose-rate remote afterloader units, require:
 - a. An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who has been trained in the operation and emergency response for the unit, to be physically present during the initiation of all patient treatments involving the unit; and
 - b. An authorized medical physicist and either an authorized user or an individual, under the supervision of an authorized user, who has been trained to remove each source applicator in the event of an emergency involving the unit, to be immediately available during continuation of all patient treatments involving the unit.
 2. For high dose-rate remote afterloader units, require:
 - a. An authorized user and an authorized medical physicist to be physically present during the initiation of all patient treatments involving the unit; and
 - b. An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who has been trained in the operation and emergency response for the unit, to be

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physically present during continuation of all patient treatments involving the unit.

3. For gamma stereotactic radiosurgery units, require an authorized user and an authorized medical physicist to be physically present throughout all patient treatments involving the unit. As used in this provision, physically present means to be within hearing distance of normal voice, and does not include the use of portable communication devices, intercoms, or other devices that could be used to amplify the human voice.
 4. Notify the radiation safety officer, or radiation safety officer's designee, and an authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.
- G.** A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source:
1. Remaining in the unshielded position; or
 2. Lodged within the patient following completion of the treatment.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-733. Dosimetry Equipment

- A.** Except for low dose-rate remote afterloader sources where the source output or activity is determined by the manufacturer, a licensee shall have a calibrated dosimetry system available for use. To satisfy this requirement, one of the following two conditions shall be met.
1. The system shall have been calibrated using a system or source traceable to the National Institute of Science and Technology (NIST) and published protocols accepted by nationally recognized bodies; or by a calibration laboratory accredited by the American Association of Physicists in Medicine (AAPM). The calibration shall have been performed within the previous two years and after any servicing that may have affected system calibration; or
 2. The system shall have been calibrated within the previous four years. Eighteen to 30 months after that calibration, the system shall have been intercompared with another dosimetry system that was calibrated within the past 24 months by NIST or by a calibration laboratory accredited by the AAPM. The results of the intercomparison shall indicate that the calibration factor of the licensee's system had not changed by more than two percent. The licensee may not use the intercomparison result to change the calibration factor. When intercomparing dosimetry systems to be used for calibrating sealed sources for therapeutic units, the licensee shall use a comparable unit with beam attenuators or collimators, as applicable, and sources of the same radionuclide as the source used at the licensee's facility.
- B.** The licensee shall have a dosimetry system available for use for spot-check output measurements, if applicable. To satisfy this requirement, the system may be compared with a system that has been calibrated in accordance with subsection (A). This comparison shall have been performed within the previous year and after each servicing that may have affected system calibration. The spot-check system may be the same system used to meet the requirement in subsection (A).
- C.** The licensee shall retain, for three years from the date of the procedure, a record of each calibration, intercomparison, and comparison.

Historical Note

New Section made by final rulemaking at 13 A.A.R.

1217, effective May 5, 2007 (Supp. 07-1).

R12-1-734. Full Calibration Measurements on Teletherapy Units

- A.** A licensee authorized to use a teletherapy unit for medical use shall perform full calibration measurements on each teletherapy unit:
1. Before the first medical use of the unit; and
 2. Before medical use under the following conditions:
 - a. Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output obtained at the last full calibration corrected mathematically for radioactive decay;
 - b. Following replacement of the source or following reinstallation of the teletherapy unit in a new location;
 - c. Following any repair of the teletherapy unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
 3. At intervals not exceeding one year.
- B.** To satisfy the requirement of subsection (A), full calibration measurements shall include determination of:
1. The output within ± 3 percent for the range of field sizes and for the distance or range of distances used for medical use;
 2. The coincidence of the radiation field and the field indicated by the light beam localizing device;
 3. The uniformity of the radiation field and its dependence on the orientation of the useful beam;
 4. Timer accuracy and linearity over the range of use;
 5. On-off error; and
 6. The accuracy of all distance measuring and localization devices in medical use.
- C.** A licensee shall use the dosimetry system described in R12-1-733(A) to measure the output for one set of exposure conditions. The remaining radiation measurements required in subsection (B)(1) may be made using a dosimetry system that indicates relative dose rates.
- D.** A licensee shall make full calibration measurements required by subsection (A) in accordance with published protocols accepted by nationally recognized bodies.
- E.** A licensee shall mathematically correct the outputs determined in subsection (B)(1) for physical decay for intervals not exceeding one month for cobalt-60, six months for cesium-137, or at intervals consistent with 1 percent decay for all other nuclides.
- F.** Full calibration measurements required by subsection (A) and physical decay corrections required by subsection (E) shall be performed by an authorized medical physicist.
- G.** A licensee shall retain a record of each calibration for three years from the date it was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-735. Full Calibration Measurements on Remote Afterloader Units

- A.** A licensee authorized to use a remote afterloader unit for medical use shall perform full calibration measurements on each unit:
1. Before the first medical use of the unit;
 2. Before medical use under the following conditions:
 - a. Following replacement of the source or following reinstallation of the unit in a new location outside the facility; and

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- b. Following any repair of the unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
 - 3. At intervals not exceeding one quarter for high dose-rate, medium dose-rate, and pulsed dose-rate remote afterloader units with sources whose half-life exceeds 75 days; and
 - 4. At intervals not exceeding one year for low dose-rate remote afterloader units.
- B.** To satisfy the requirement of subsection (A), full calibration measurements shall include, as applicable, determination of:
- 1. The output within ± 5 percent;
 - 2. Source positioning accuracy to within ± 1 millimeter;
 - 3. Source retraction with backup battery upon power failure;
 - 4. Length of the source transfer tubes;
 - 5. Timer accuracy and linearity over the typical range of use;
 - 6. Length of the applicators; and
 - 7. Function of the source transfer tubes, applicators, and transfer tube-applicator interfaces.
- C.** A licensee shall use the dosimetry system described in R12-1-733(A) to measure the output.
- D.** A licensee shall make full calibration measurements required by subsection (A) in accordance with published protocols accepted by nationally recognized bodies.
- E.** In addition to the requirements for full calibrations for low dose-rate remote afterloader units in subsection (B), a licensee shall perform an autoradiograph of the sources to verify inventory and source arrangement at intervals not exceeding one quarter.
- F.** For low dose-rate remote afterloader units, a licensee may use measurements provided by the source manufacturer that are made in accordance with subsections (A) through (E).
- G.** A licensee shall mathematically correct the outputs determined in subsection (B)(1) for physical decay at intervals consistent with 1 percent physical decay.
- H.** Full calibration measurements required by subsection (A) and physical decay corrections required by subsection (G) shall be performed by an authorized medical physicist.
- I.** A licensee shall retain a record of each calibration for three years from the date it was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-736. Full Calibration Measurements on Gamma Stereotactic Radiosurgery Units

- A.** A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform full calibration measurements on each unit:
- 1. Before the first medical use of the unit;
 - 2. Before medical use under the following conditions:
 - a. Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output obtained at the last full calibration corrected mathematically for radioactive decay;
 - b. Following replacement of the sources or following reinstallation of the gamma stereotactic radiosurgery unit in a new location; and
 - c. Following any repair of the gamma stereotactic radiosurgery unit that includes removal of the sources or major repair of the components associated with the source assembly; and
 - 3. At intervals not exceeding one year, with the exception that relative helmet factors need only be determined before the first medical use of a helmet and following any damage to a helmet.
- B.** To satisfy the requirement of subsection (A), full calibration measurements shall include determination of:
- 1. The output within ± 3 percent;
 - 2. Relative helmet factors;
 - 3. Isocenter coincidence;
 - 4. Timer accuracy and linearity over the range of use;
 - 5. On-off error;
 - 6. Trunnion centricity;
 - 7. Treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;
 - 8. Helmet microswitches;
 - 9. Emergency timing circuits; and
 - 10. Stereotactic frames and localizing devices (trunnions).
- C.** A licensee shall use the dosimetry system described in R12-1-733(A) to measure the output for one set of exposure conditions. The remaining radiation measurements required in subsection (B)(1) may be made using a dosimetry system that indicates relative dose rates.
- D.** A licensee shall make full calibration measurements required by subsection (A) in accordance with published protocols accepted by nationally recognized bodies.
- E.** A licensee shall mathematically correct the outputs determined in subsection (B)(1) at intervals not exceeding one month for cobalt-60 and at intervals consistent with 1 percent physical decay for all other radionuclides.
- F.** Full calibration measurements required by subsection (A) and physical decay corrections required by subsection (E) shall be performed by an authorized medical physicist.
- G.** A licensee shall retain a record of each calibration for three years from the date of the procedure.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-737. Periodic Spot-checks for Teletherapy Units

- A.** A licensee authorized to use teletherapy units for medical use shall perform output spot-checks on each teletherapy unit once in each calendar month that include determination of:
- 1. Timer accuracy, and timer linearity over the range of use;
 - 2. On-off error;
 - 3. The coincidence of the radiation field and the field indicated by the light beam localizing device;
 - 4. The accuracy of all distance measuring and localization devices used for medical use;
 - 5. The output for one typical set of operating conditions measured with the dosimetry system described in R12-1-733(B); and
 - 6. The difference between the measurement made in subsection (A)(5) and the anticipated output, expressed as a percentage of the anticipated output.
- B.** A licensee shall perform measurements required by subsection (A) in accordance with written procedures established by an authorized medical physicist. That individual need not actually perform the spot-check measurements.
- C.** A licensee shall have an authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.
- D.** A licensee authorized to use a teletherapy unit for medical use shall perform safety spot-checks of each teletherapy facility once in each calendar month and after each source installation to assure proper operation of:
- 1. Electrical interlocks at each teletherapy room entrance;

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2. Electrical or mechanical stops installed for the purpose of limiting use of the primary beam of radiation (restriction of source housing angulation or elevation, carriage or stand travel and operation of the beam on-off mechanism);
 3. Source exposure indicator lights on the teletherapy unit, on the control console, and in the facility;
 4. Viewing and intercom systems;
 5. Treatment room doors from inside and outside the treatment room; and
 6. Electrically assisted treatment room doors with the teletherapy unit electrical power turned off.
- E. If the results of the checks required in subsection (D) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- F. A licensee shall retain a record of each spot-check required by subsections (A) and (D) for three years from the date of the procedure, and a copy of the procedures required by subsection (B) until licensee terminates all medical activities involving the teletherapy unit.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-738. Periodic Spot-checks for Remote Afterloader Units

- A. A licensee authorized to use a remote afterloader unit for medical use shall perform spot-checks of each remote afterloader facility and on each unit:
1. Before the first use of a high dose-rate, medium dose-rate, or pulsed dose-rate remote afterloader unit on a given day;
 2. Before each patient treatment with a low dose-rate remote afterloader unit; and
 3. After each source installation.
- B. A licensee shall perform the measurements required by subsection (A) in accordance with written procedures established by an authorized medical physicist. That individual need not actually perform the spot-check measurements.
- C. A licensee shall have an authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.
- D. To satisfy the requirements of subsection (A), spot-checks shall, at a minimum, assure proper operation of:
1. Electrical interlocks at each remote afterloader unit room entrance;
 2. Source exposure indicator lights on the remote afterloader unit, on the control console, and in the facility;
 3. Viewing and intercom systems in each high dose-rate, medium dose-rate, and pulsed dose-rate remote afterloader facility;
 4. Emergency response equipment;
 5. Radiation monitors used to indicate the source position;
 6. Timer accuracy;
 7. Clock (date and time) in the unit's computer; and
 8. Decayed source activity in the unit's computer.
- E. If the results of the checks required in subsection (D) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- F. A licensee shall retain a record of each spot-check required by subsections (A) and (D) for three years from the date of the

procedure, and a copy of the procedures required by subsection (B) until licensee terminates all medical activities involving the afterloader unit.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-739. Periodic Spot-checks for Gamma Stereotactic Radiosurgery Units

- A. A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform spot-checks of each gamma stereotactic radiosurgery facility and on each unit:
1. Monthly;
 2. Before the first use of the unit on a given day; and
 3. After each source installation.
- B. A licensee shall:
1. Perform the measurements required by subsection (A) in accordance with written procedures established by an authorized medical physicist. That individual need not actually perform the spot-check measurements.
 2. Have the authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.
- C. To satisfy the requirements of subsection (A)(1), spot-checks shall, at a minimum:
1. Assure proper operation of:
 - a. Treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;
 - b. Helmet microswitches;
 - c. Emergency timing circuits; and
 - d. Stereotactic frames and localizing devices (trunnions).
 2. Determine:
 - a. The output for one typical set of operating conditions measured with the dosimetry system described in R12-1-733(B);
 - b. The difference between the measurement made in subsection (C)(2)(a) and the anticipated output, expressed as a percentage of the anticipated output;
 - c. Source output against computer calculation;
 - d. Timer accuracy and linearity over the range of use;
 - e. On-off error; and
 - f. Trunnion centricity.
- D. To satisfy the requirements of subsections (A)(2) and (A)(3), spot-checks shall assure proper operation of:
1. Electrical interlocks at each gamma stereotactic radiosurgery room entrance;
 2. Source exposure indicator lights on the gamma stereotactic radiosurgery unit, on the control console, and in the facility;
 3. Viewing and intercom systems;
 4. Timer termination;
 5. Radiation monitors used to indicate room exposures; and
 6. Emergency off buttons.
- E. A licensee shall arrange for the repair of any system identified in subsection (C) that is not operating properly as soon as possible.
- F. If the results of the checks required in subsection (D) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- G. A licensee shall retain a record of each check required by subsections (C) and (D) for three years from the date of the procedure, and a copy of the procedures required by subsection (B)

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until licensee terminates all medical activities involving the radiosurgery unit.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-740. Additional Requirements for Mobile Remote Afterloader Units

- A.** A licensee providing mobile remote afterloader service shall:
1. Check survey instruments before medical use at each address of use or on each day of use, whichever is more frequent; and
 2. Account for all sources before departure from a client's address of use.
- B.** In addition to the periodic spot-checks required by R12-1-738, a licensee authorized to use mobile afterloaders for medical use shall perform checks on each remote afterloader unit before use at each address of use. At a minimum, checks shall be made to verify the operation of:
1. Electrical interlocks on treatment area access points;
 2. Source exposure indicator lights on the remote afterloader unit, on the control console, and in the facility;
 3. Viewing and intercom systems;
 4. Applicators, source transfer tubes, and transfer tube-applicator interfaces;
 5. Radiation monitors used to indicate room exposures;
 6. Source positioning (accuracy); and
 7. Radiation monitors used to indicate whether the source has returned to a safe shielded position.
- C.** In addition to the requirements for checks in subsection (B), a licensee shall ensure overall proper operation of the remote afterloader unit by conducting a simulated cycle of treatment before use at each address of use.
- D.** If the results of the checks required in subsection (B) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- E.** A licensee shall retain a record of each check required by subsection (B) for three years from the date of the procedure.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-741. Additional Radiation Surveys of Sealed Sources used in Radiation Therapy

- A.** In addition to the survey requirement in Article 4 of this Chapter, a person licensed to use sealed sources in the practice of radiation therapy shall make surveys to ensure that the maximum radiation levels and average radiation levels from the surface of the main source safe with each source in the shielded position do not exceed the levels stated in the Sealed Source and Device Registry.
- B.** A licensee shall make the survey required by subsection (A) at installation of a new source and following repairs to any source shielding, a source's driving unit, or other electronic or mechanical component that could expose the source, reduce the shielding around a source, or compromise the radiation safety of the unit or the source.
- C.** A licensee shall retain a record of the radiation surveys required by subsection (A) for three years from the date of each survey.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-742. Five-year Inspection for Teletherapy and Gamma Stereotactic Radiosurgery Units

- A.** A licensee shall have each teletherapy unit and gamma stereotactic radiosurgery unit fully inspected and serviced during source replacement or at intervals not to exceed five years, whichever comes first, to assure proper functioning of the source exposure mechanism.
- B.** This inspection and servicing may only be performed by persons specifically licensed to do so by the Agency, NRC, or an Agreement State.
- C.** A licensee shall keep a record of each five-year inspection for three years from the date of the inspection, if the inspection determined that service was unnecessary, and three years from the date of the completed service if the inspection determined that service was needed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-743. Therapy-related Computer Systems

The licensee shall perform acceptance testing on the treatment planning system of therapy-related computer systems in accordance with published protocols accepted by nationally recognized bodies. At a minimum, the acceptance testing shall include, as applicable, verification of:

1. The source-specific input parameters required by the dose calculation algorithm;
2. The accuracy of dose, dwell time, and treatment time calculations at representative points;
3. The accuracy of isodose plots and graphic displays;
4. The accuracy of the software used to determine sealed source positions from radiographic images; and
5. The accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-744. Training for Use of Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units

- A.** Except as provided in R12-1-710, a licensee shall require an authorized user of a sealed source for a use authorized under Group 600 to be a physician who:
1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(2). To have its certification process recognized, a specialty board shall require all candidates to:
 - a. Successfully complete a minimum of three years of residency training in a radiation therapy program approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and
 - b. Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, treatment planning, quality assurance, and clinical use of stereotactic radiosurgery, remote afterloaders and external beam therapy; or

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2. Has completed a structured educational program in basic radionuclide techniques applicable to the use of a sealed source in a therapeutic medical unit that includes:
 - a. 200 hours of classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. 500 hours of work experience, under the supervision of an authorized user who meets the requirements in this Section, or equivalent Agreement State or NRC requirements at a medical institution, involving:
 - i. Reviewing full calibration measurements and periodic spot-checks;
 - ii. Preparing treatment plans and calculating treatment doses and times;
 - iii. Using administrative controls to prevent a medical event involving the use of radioactive material;
 - iv. Implementing emergency procedures to be followed in the event of the abnormal operation of the medical unit or console;
 - v. Checking and using survey meters; and
 - vi. Selecting the proper dose and how it is to be administered; and
 - c. Has completed three years of supervised clinical experience in radiation therapy, under an authorized user who meets the requirements in this Section, or equivalent Agreement State or NRC requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-doctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by subsection (A)(2)(b); and
 - d. Has obtained written attestation that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(2), and has achieved a level of competency sufficient to function independently as an authorized user of each type of therapeutic medical unit for which the individual is requesting authorized user status. The written attestation must be signed by a preceptor authorized user who meets the requirements in this Section, or equivalent Agreement State or NRC requirements for an authorized user for each type of therapeutic medical unit for which the individual is requesting authorized user status; and
 - e. Has received training in device operation, safety procedures, and clinical use for the type(s) of use for which authorization is sought. This training requirement may be satisfied by satisfactory completion of a training program provided by the vendor for new users or by receiving training supervised by an authorized user or authorized medical physicist, as appropriate, who is authorized for the type(s) of use for which the individual is seeking authorization.
- B. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note
New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-745. Report and Notification of a Medical Event

 - A. A licensee shall report any "medical" event, except for an event that results from patient intervention, in which the administration of radioactive material or radiation from radioactive material results in:
 1. A dose that differs from the prescribed dose or dose that would have resulted from the prescribed dosage by more than 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin; and
 - a. The total dose delivered differs from the prescribed dose by 20 percent or more;
 - b. The total dosage delivered differs from the prescribed dosage by 20 percent or more or falls outside the prescribed dosage range; or
 - c. The fractionated dose delivered differs from the prescribed dose, for a single fraction, by 50 percent or more.
 2. A dose that exceeds 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin from any of the following:
 - a. An administration of a wrong radiopharmaceutical containing radioactive material;
 - b. An administration of a radiopharmaceutical containing radioactive material by the wrong route of administration;
 - c. An administration of a dose or dosage to the wrong individual or human research subject;
 - d. An administration of a dose or dosage delivered by the wrong mode of treatment; or
 - e. A leaking sealed source.
 3. A dose to the skin or an organ or tissue other than the treatment site that exceeds by 0.5 Sv (50 rem) to an organ or tissue and 50 percent or more of the dose expected from the administration defined in the written directive (excluding, for permanent implants, seeds that were implanted in the correct site but migrated outside the treatment site).
 - B. A licensee shall report any event resulting from intervention of a patient or human research subject in which the administration of radioactive material or radiation from radioactive material results or will result in unintended permanent functional damage to an organ or a physiological system, as determined by a physician.
 - C. The licensee shall notify by telephone the Agency no later than the next calendar day after discovery of the medical event.
 - D. The licensee shall submit a written report to the Agency within 15 days after discovery of the medical event.
 1. The written report shall include:
 - a. The licensee's name;
 - b. The name of the prescribing physician;
 - c. A brief description of the event;
 - d. Why the event occurred;

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- e. The effect, if any, on each individual who received the administration;
 - f. What actions, if any, have been taken or are planned to prevent recurrence; and
 - g. Certification that the licensee notified each individual (or the individual's responsible relative or guardian), and if not, why not.
2. The report may not contain an individual's name or any other information that could lead to identification of the individual.
- E.** The licensee shall provide notification of the event to the referring physician and also notify the individual who is the subject of the medical event no later than 24 hours after its discovery, unless the referring physician personally informs the licensee either that he or she will inform the individual or that, based on medical judgment, telling the individual would be harmful. The licensee is not required to notify the individual without first consulting the referring physician. If the referring physician or the affected individual cannot be reached within 24 hours, the licensee shall notify the individual as soon as possible thereafter. The licensee may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the medical event, because of any delay in notification. To meet the requirements of this subsection, the notification of the individual who is the subject of the medical event may be made instead to that individual's responsible relative or guardian. If a verbal notification is made, the licensee shall inform the individual, or appropriate responsible relative or guardian, that a written description of the event can be obtained from the licensee upon request. The licensee shall provide such a written description if requested.
- F.** Aside from the notification requirement, nothing in this Section affects any rights or duties of licensees and physicians in relation to each other, to individuals affected by the medical event, or to that individual's responsible relatives or guardians.
- G.** A licensee shall:
- 1. Annotate a copy of the report provided to the Agency with the:
 - a. Name of the individual who is the subject of the event; and
 - b. Social Security number or other identification number, if one has been assigned, of the individual who is the subject of the event; and
 - 2. Provide a copy of the annotated report to the referring physician, if other than the licensee, no later than 15 days after the discovery of the event.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-746. Report and Notification of a Dose to an Embryo, Fetus, or Nursing Child

- A.** A licensee shall report any dose to an embryo/fetus that is greater than 50 mSv (5 rem) dose equivalent that is a result of an administration of radioactive material or radiation from radioactive material to a pregnant individual unless the dose to the embryo/fetus was specifically approved, in advance, by the authorized user.
- B.** A licensee shall report any dose to a nursing child that is a result of an administration of radioactive material to a breast-feeding individual that:
- 1. Is greater than 50 mSv (5 rem) total effective dose equivalent; or

- 2. Has resulted in unintended permanent functional damage to an organ or a physiological system of the child, as determined by a physician.
- C.** The licensee shall notify the Agency by telephone no later than the next calendar day after discovery of a dose to the embryo, fetus, or nursing child that requires a report in subsections (A) or (B).
- D.** The licensee shall submit a written report to the Agency within 15 days after discovery of a dose to the embryo, fetus, or nursing child that requires a report in subsections (A) or (B). The written report shall include:
- 1. The licensee's name;
 - 2. The name of the prescribing physician;
 - 3. A brief description of the event;
 - 4. Why the event occurred;
 - 5. The effect, if any, on the embryo/fetus or the nursing child;
 - 6. What actions, if any, have been taken or are planned to prevent recurrence; and
 - 7. Certification that the licensee notified the pregnant individual or mother (or the mother's or child's responsible relative or guardian), and if not, why not.
- E.** The report, required in subsection (D), shall not contain the individual's or child's name or any other information that could lead to identification of the individual or child.
- F.** The licensee shall provide notification of the event to the referring physician and also notify the pregnant individual or mother, both hereafter referred to as the mother, no later than 24 hours after discovery of an event that would require reporting under subsections (A) or (B), unless the referring physician personally informs the licensee either that he or she will inform the mother or that, based on medical judgment, telling the mother would be harmful. The licensee is not required to notify the mother without first consulting with the referring physician. If the referring physician or mother cannot be reached within 24 hours, the licensee shall make the appropriate notifications as soon as possible thereafter. The licensee shall not delay any appropriate medical care for the embryo, fetus, or for the nursing child, including any necessary remedial care as a result of the event, because of any delay in notification. To meet the requirements of this subsection, the notification may be made to the mother's or child's responsible relative or guardian instead of the mother. If a verbal notification is made, the licensee shall inform the mother, or the mother's or child's responsible relative or guardian, that a written description of the event can be obtained from the licensee upon request. The licensee shall provide the written description upon request.

- G.** A licensee shall:
- 1. Make a copy of the report provided to the Agency and include with it the:
 - a. Name of the pregnant individual or the nursing child who is the subject of the event; and
 - b. Social Security number or other identification number, if one has been assigned, of the pregnant individual or the nursing child who is the subject of the event; and
 - 2. Provide the copy of the information required in subsection (G)(1) to the referring physician, if other than the licensee, no later than 15 days after the discovery of the event.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

Exhibit A. Medical Use Groups**Group 100**

Included is the use of any unsealed radioactive material for use in uptake, dilution, or excretion studies and not requiring a written directive: The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R12-1-703(C)(2)(a), or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R12-1-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R12-1-712, a physician who is an authorized user and who meets the requirements specified in R12-1-721, or R12-1-723 and R12-1-721(A)(3)(b)(vii), or an individual under the supervision of either as specified in R12-1-706; or
3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

Group 200

Included is the use of any unsealed radioactive material for use in imaging and localization not requiring a written directive. PET radiopharmaceuticals may be used if the licensee meets the requirements in R12-1-716. The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R12-1-703(C)(2)(a), or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R12-1-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R12-1-712, a physician who is an authorized user and who meets the requirements specified in R12-1-721 or R12-1-723 and R12-1-721(A)(3)(b)(vii), or an individual under the supervision of either as specified in R12-1-706; or
3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

Group 300

Included is the use of any unsealed radioactive material for medical use (radiopharmaceutical) for which a written directive is required. The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R12-1-703(C)(2)(a) or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R12-1-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R12-1-712, a physician who is an

authorized user and who meets the requirements specified in R12-1-721 or R12-1-723, or an individual under the supervision of either as specified in R12-1-706; or

3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA.

Group 400

Included is the use of any brachytherapy source for therapeutic medical use that is manufactured in accordance with R12-1-703(C)(2)(b) and:

1. Approved for therapeutic use in the Sealed Source and Device Registry; or
2. Part of a research protocol that is approved for therapeutic use under an active Investigational Device Exemption (IDE) application accepted by the FDA, and meets the requirements of R12-1-709.

Group 500

Included is the use of any sealed source that is manufactured in accordance with R12-1-703(C)(2)(b), and is approved for diagnostic use in the Sealed Source and Device Registry.

Group 600

Included is the use of sealed sources in photon emitting remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units that are manufactured in accordance with R12-1-703(C)(2)(b) and:

1. Approved for therapeutic use in the Sealed Source and Device Registry; or
2. Part of a research protocol that is approved for therapeutic use under an active Investigational Device Exemption (IDE) application accepted by the FDA and meets the requirements of R12-1-709.

Group 1000

A licensee may use radioactive material or a radiation source approved for medical use which is not specifically addressed in R12-1-309(A)(4) if:

1. The applicant or licensee has submitted the information required by this Article; and
2. The applicant or licensee has received written approval from the Agency in a license or license amendment and uses the material in accordance with the rules and specific conditions the Agency considers necessary for the medical use of the material.

Historical Note

New Exhibit adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

ARTICLE 8. RADIATION SAFETY REQUIREMENTS FOR ANALYTICAL X-RAY OPERATIONS**R12-1-801. Scope**

The rules in this Article establish requirements for the use of analytical x-ray equipment by persons registered under R12-1-204. The provisions of this Article supplement other applicable provisions of this Chapter.

Historical Note

Former Rule Section H.1; Former Section R12-1-801

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repealed, new Section R12-1-801 adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-802. Definitions

“Analytical x-ray equipment” means devices or machines used for x-ray diffraction or x-ray induced fluorescence analysis.

“Analytical x-ray system” means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials.

“Enclosed beam x-ray system” means an analytical x-ray system constructed in such a way that access to the interior of the enclosure housing the x-ray source is precluded during operation except through bypassing of interlocks or other safety devices to perform maintenance or servicing.

“Fail-safe characteristic” means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

“Local component” means part of an analytical x-ray system and includes each area that is struck by x-rays, such as radiation source housings, port and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors and shielding, but does not include power supplies, transformers, amplifiers, readout devices, and control panels.

“Normal operating procedures” means instructions or procedures including, but not limited to, sample insertion and manipulation, equipment alignment, routine maintenance by the registrant, and data recording procedures which are related to radiation safety.

“Open beam x-ray system” means an analytical x-ray system which permits an individual to place some body part in the primary beam path during normal operation.

“Primary beam” means radiation which passes through an aperture of the source housing on a direct path from the x-ray tube.

Historical Note

Former Rule Section H.2; Former Section R12-1-802 repealed, new Section R12-1-802 adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-803. Enclosed-beam X-ray Systems

- A. Enclosed beam x-ray systems are exempt from other equipment requirements contained in this Article provided the enclosed beam x-ray systems are designed and constructed so that radiation levels measured at 5 cm from any accessible surface of the enclosure housing the x-ray source do not exceed 5 μ Sv (0.5 mrem) in one hour.
- B. A registrant using enclosed beam x-ray systems shall comply with applicable provisions of R12-1-804(A), R12-1-805(B), and 12 A.A.C. 1, Article 4.
- C. A person who maintains or services analytical x-ray systems, shall:
 1. Obtain permission in advance from the radiation safety officer before bypassing interlocks or other safety devices,
 2. Label equipment as “out of service” until maintenance or service is completed,
 3. Wear extremity personnel monitoring devices, and
 4. Ensure that interlocks or other safety devices are operating upon completion of maintenance or service.

Historical Note

Former Rule Section H.3; Former Section R12-1-803 repealed, new Section R12-1-803 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-803 repealed, new Section R12-1-803 adopted effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-804. Open-beam X-ray Systems

- A. A registrant shall label open beam x-ray systems with a readily discernible sign or signs bearing the radiation symbol and the words:
 1. “CAUTION -- HIGH INTENSITY X-RAY BEAM,” or a similar warning, on the x-ray source housing; and
 2. “CAUTION RADIATION -- THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED” or a similar warning, near any switch that energizes an x-ray tube if the radiation source is an x-ray tube.
- B. A registrant shall ensure that an open beam x-ray system has all of the following warning devices:
 1. X-ray tube status (On-Off) indicator in systems where the primary beam is controlled in this fashion;
 2. Shutter status (Open-Closed) indicators near each port on the radiation housing for systems which control the primary beam; and
 3. A clearly visible warning light labeled with the words “X-RAY ON,” or a similar warning located near any switch that energizes an x-ray tube, illuminated only when the tube is energized; and
 4. The warning devices in subsections (B)(1) through (3) shall be labeled so that their purpose is easily identified.
- C. A registrant shall ensure that any apparatus utilized in beam alignment procedures is designed in such a way that excessive radiation will not strike the operator. Particular attention shall be given to viewing devices, in order to ascertain that lenses and other transparent components attenuate the beam to an acceptable level.
- D. A registrant shall provide an interlock device which prevents entry of any portion of an individual’s body into the primary beam or causes the primary beam to be shut off upon entry into its path on all open-beam x-ray systems. A registrant may apply to the Agency for an exemption from the requirements of a safety device. An application for exemption shall include:
 1. A description of the various safety devices that have been evaluated;
 2. The reason each device cannot be used; and
 3. A description of the alternative methods that will be used to minimize accidental exposure, including procedures to assure that operators and others in the area will be informed of the absence of safety devices.
- E. A registrant shall use only systems constructed so that:
 1. Each x-ray tube housing is equipped with an interlock that automatically shuts off the tube if the tube is removed from the radiation source housing or the housing is disassembled; and
 2. With all shutters closed, radiation measured at a distance of 5 centimeters from the surface of the system is not capable of producing a dose that exceeds 25 Sv (2.5 mRem) in one hour for the specified tube rating of the x-ray tube.
- F. A registrant shall supply each x-ray generating system with a protective cabinet that limits leakage radiation measured at a distance of 5 cm (2 in) from the cabinet surface, so that the system is not capable of producing a dose equivalent that exceeds 25 μ Sv (2.5 mrem) in one hour.

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- G.** A registrant shall ensure that the local components of an analytical x-ray system are located and arranged and have sufficient shielding or access control for the specified tube rating to prevent the radiation level in any area adjacent to the local component group from exceeding the dose limits in R12-1-416.
- H.** A registrant shall perform a radiation survey of the local component group of each analytical x-ray system to demonstrate compliance with subsection (G) upon:
1. Installation,
 2. Change in configuration, or
 3. Maintenance that affects the radiation level in any area adjacent to the local component group.
- I.** A registrant shall maintain a record of each survey for three years or until the analytical x-ray system is no longer used, whichever period is shorter.

Historical Note

Former Rule Section H.4; Former Section R12-1-804 repealed, new Section R12-1-804 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-804 renumbered as Section R12-1-805 without change, new Section R12-1-804 adopted effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-805. Administrative Responsibilities

- A.** A registrant shall designate a radiation safety officer who shall:
1. Establish and maintain operational procedures so that the radiation exposure of each worker is kept ALARA;
 2. Instruct all personnel who work with or near radiation producing machines in safety practices;
 3. Maintain a system of personnel monitoring;
 4. Establish radiation control areas, including placement of appropriate radiation warning signs or devices;
 5. Provide a radiation safety inspection of radiation producing machines on a routine basis;
 6. Review modifications to x-ray systems, including x-ray tube housing, cameras, diffractometers, shielding, and safety interlocks;
 7. Investigate and report proper authorities any case of excessive exposure to personnel and take remedial action; and,
 8. Be familiar with all applicable rules for control of ionizing radiation.
- B.** An individual shall not be permitted to operate or maintain an open beam analytical x-ray system unless the individual has received instruction in and demonstrated competence in all of the following:
1. Identification of radiation hazards associated with the use of the equipment;
 2. Significance of all radiation warning and safety devices, interlocks incorporated into the equipment, or the reasons that devices or interlocks have not been installed on certain pieces of equipment and the extra precautions required in lieu of these precautions;
 3. Proper operating procedures for the equipment;
 4. Recognition of symptoms of acute localized radiation exposure; and
 5. Proper procedure for reporting an actual or suspected exposure.
- C.** A registrant shall maintain records of instruction and competence for Agency inspection for three years from the date of course completion or demonstration.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-805 renumbered as Section R12-1-806 without change. Former Section R12-1-804 renumbered as Section R12-1-805 without change effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-806. Operating Requirements

- A.** A radiation safety officer shall establish written emergency procedures and post the procedures in a conspicuous location. The procedures shall include the telephone number of the radiation safety officer.
- B.** A registrant shall ensure that written operating procedures are available for all analytical x-ray equipment workers. An individual shall not operate analytical x-ray equipment in any manner other than that specified in the procedures unless the individual obtains the radiation safety officer's written approval.
- C.** An individual shall not bypass a safety device or interlock unless the individual has obtained Radiation Safety Officer approval. The approval shall be for a specific period of time. When a safety device or interlock has been bypassed, the Radiation Safety Officer shall place a readily discernible sign on the radiation source housing, warning the reader of the unsafe condition. A registrant shall maintain the written record of the bypass approval for three years after the approval expires.
- D.** Except as authorized in subsection (C), an individual shall not perform an operation involving removal of covers, shielding materials, or tube housings or modification of shutters, collimators, or beam stops without ascertaining that the tube is off and that it will remain off until all protective devices have been restored to the normal operating condition. An individual repairing analytical x-ray equipment shall use the main switch, rather than interlocks, for routine shutdown in preparation for repairs.
- E.** A registrant shall ensure that unused ports on radiation source housings are closed and secured against unauthorized access to the radiation source.
- F.** Finger or wrist personnel monitoring devices shall be used by:
1. Operators of open beam analytical x-ray equipment not equipped with a safety device; and
 2. Personnel performing maintenance procedures that require the presence of a primary x-ray beam when any local component is disassembled or removed.
- G.** A registrant shall ensure that each safety and warning device is tested for proper operation at intervals that do not exceed one month and maintain a record of each test for three years from the date the test is completed.

Historical Note

Former Section R12-1-805 renumbered as Section R12-1-806 without change effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-807. Surveys

- A.** To ensure that personnel exposure does not result in a dose to an individual that exceeds the dose limits specified in Article 4, a registrant shall perform a radiation survey upon:
1. Installation of the equipment and at least once each year after installation;

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2. Change in the initial arrangement, number, or type of local components in the system;
 3. Maintenance that involves disassembly or removal of a local component in the system;
 4. Maintenance that involves alignment, if alignment requires the generation of the primary x-ray beam while any local component of the system is disassembled or removed;
 5. A visual inspection of the local components in the system that reveals an abnormal condition; or
 6. Determination that personnel are being exposed to radiation in excess of established levels recorded in monitoring records for personnel during previous monitoring periods or the occupational dose limits specified in Article 4.
- B.** The radiation surveys in subsection (A) are not required if the registrant demonstrates that the local components of an analytical x-ray system are located and arranged, and have sufficient shielding or access control, to limit personnel exposure to a level that is ALARA and below the occupational dose limits in Article 4. The Agency shall determine ALARA radiation levels based on the specified x-ray tube rating.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-808. Posting

A registrant shall conspicuously post each area or room that contains analytical x-ray equipment with a sign or signs that bear the radiation symbol and the words "CAUTION – X-RAY EQUIPMENT" or words with a similar meaning.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-809. Training

A registrant shall not allow an individual to operate or maintain analytical x-ray equipment unless the individual has received training and demonstrated competence in:

1. Identifying radiation hazards associated with use of the equipment;
2. Recognizing and using radiation warning and safety devices, including interlocks that are incorporated into the equipment, and understanding why these devices are sometimes not installed;
3. Taking precautions associated with use of the equipment;
4. Recognizing symptoms of an acute localized exposure; and
5. Following proper procedure for reporting a suspected personnel exposure.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 9. PARTICLE ACCELERATORS**R12-1-901. Purpose and Scope**

- A.** This Article establishes procedures and requirements for the registration and the use of particle accelerators.
- B.** In addition to the requirements of this Article, all registrants are subject to the requirements of Articles 1, 2, 4 and 10. Registrants engaged in industrial radiographic operations are subject to the requirements of Article 11, and registrants engaged in the healing arts are subject to the requirements of Article 6 of this Chapter. Registrants using a particle accelerator for the production of radioactive material are subject to the require-

ments of Article 3, and if the radioactive material is used for medical purposes, Article 7.

Historical Note

Former Rule Section I.1; Former Section R12-1-901 repealed, new Section R12-1-901 adopted effective June 30, 1977 (Supp. 77-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-902. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

"Added filter" (See Article 6)

"Arc therapy" means radiation therapy that uses electrons to treat large, superficial volumes that follow curved surfaces, as in postmastectomy patients.

"Authorized medical physicist" means an individual who meets the requirements in R12-1-711. For purposes of ensuring that personnel are adequately trained, an authorized medical physicist is a "qualified expert" as defined in Article 1.

"Beam-limiting device" (See Article 6)

"Beam-monitoring system" means a system of devices that will monitor the useful beam during irradiation and terminate irradiation when a preselected number of monitor units has been accumulated.

"Control panel" (See Article 6)

"Full beam detector" means a radiation detector of such size that the total cross section of the maximum size useful beam is intercepted.

"Gantry" means that part of a linear accelerator that supports the radiation source so that it can rotate about a horizontal axis.

"Interlock" (See Article 1)

"Isocenter" means the point of intersection of the collimator axis and the axis of rotation of the gantry.

"Monitor unit" means a unit response from the beam monitoring system from which the absorbed dose can be calculated.

"Moving beam therapy" means radiation therapy in which there is displacement of the useful beam relative to the patient. Moving beam therapy includes arc therapy, skip therapy, and rotational beam therapy.

"Rotational beam therapy" means radiation therapy that is administered to a patient from a radiation source that rotates around the patient's body or the patient is rotated while the beam is held fixed.

"Skip therapy" means rotational beam therapy that is administered in a way that maximizes the dose to an area of interest and minimizes the dose to surrounding healthy tissue.

"Spot check" (See Article 6)

"Stationary beam therapy" means radiation therapy that involves a beam from a radiation source that is aimed at the patient from different directions. The distance of the source from the isocenter remains constant irrespective of the beam direction.

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“Virtual source” means a point from which radiation appears to originate.

Historical Note

Former Rule Section I.2; Former Section R12-1-902 repealed, new Section R12-1-902 adopted effective June 30, 1977 (Supp. 77-3). Amended effective June 13, 1997 (Supp. 97-2). Section repealed by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). New Section made by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-903. General Registration Requirements

- A.** The requirements in this Section supplement the registration requirements in 12 A.A.C. 1, Article 2.
- B.** The Agency shall approve a registration application for use of a particle accelerator only if the Agency determines that:
1. The applicant is qualified by training and experience to use the accelerator for the purpose in the application submitted to the Agency under Article 2;
 2. The applicant’s proposed equipment, facilities, and operating and emergency procedures are adequate to protect public health;
 3. The applicant satisfies any other applicable requirements in this Section; and 4. The applicant has appointed a radiation safety officer.

Historical Note

Former Rule Section I.3; Former Section R12-1-903 repealed, new Section R12-1-903 adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-904. Registration of Particle Accelerators Used in the Practice of Medicine

- A.** The requirements in this Section supplement the registration requirements in R12-1-903.
- B.** An applicant that is a “medical institution,” as defined in 12 A.A.C. 1, Article 7, and performing human research shall appoint a radiation safety committee that meets the following requirements:
1. The committee shall consist of at least four individuals and shall include:
 - a. An authorized user of each type of use permitted by the registration,
 - b. The Radiation Safety Officer,
 - c. A representative of the nursing service, and
 - d. A representative of management who is neither an authorized user nor a Radiation Safety Officer, and
 - e. Any other members the registrant selects;
 2. The committee shall meet at least once in each 12-month period, unless otherwise specified by registration condition;
 3. To conduct business at least 50 percent of the membership of the committee shall be present including the Radiation Safety Officer and the management representative;
 4. The minutes of each radiation safety committee meeting shall include a reference of any discussion or documents related to the review required in R12-1-407(C);
 5. Review the radiation safety program for all sources of radiation as required in R12-1-407(C);

6. Establish a table that contains investigational levels for occupational and public dose that, when exceeded, will initiate an investigation and consideration of actions by the Radiation Safety Officer; and
 7. Establish the safety objectives of the quality management program required by subsection (E).
- C.** The applicant shall ensure that an individual designated as an authorized user is an Arizona licensed physician; approved by the radiation safety committee, if applicable; and is:
1. Certified in:
 - a. Radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology; or
 - b. Radiation oncology by the American Osteopathic Board of Radiology; or
 - c. Radiology, with specialization in radiotherapy, as a British “Fellow of the Faculty of Radiology” or “Fellow of the Royal College of Radiology”; or
 - d. Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or
 2. Engaged in the active practice of therapeutic radiology, and has completed 200 hours of instruction in basic techniques applicable to the use of a particle accelerator, 500 hours of supervised work experience, and a minimum of three years of supervised clinical experience.
 - a. To satisfy the requirement for instruction, the classroom and laboratory training shall include all of the following subjects.
 - i. Radiation physics and instrumentation,
 - ii. Radiation protection,
 - iii. Mathematics pertaining to the use and measurement of radiotherapy, and
 - iv. Radiation biology.
 - b. To satisfy the requirement for supervised work experience, training shall occur under the supervision of an authorized user at a medical institution and shall include:
 - i. Reviewing full calibration measurements and periodic spot checks,
 - ii. Preparing treatment plans and calculating treatment times,
 - iii. Using administrative controls to prevent misadministration,
 - iv. Implementing emergency procedures to be followed in the event of the abnormal operation of a particle accelerator, and
 - v. Checking and using survey meters.
 - c. To satisfy the requirement for a period of supervised clinical experience, training shall include one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user at a medical institution. The supervised clinical experience shall include:
 - i. Examining individuals and reviewing their case histories to determine their suitability for treatment, noting any limitations or contraindications;
 - ii. Selecting the proper dose and how it is to be administered;
 - iii. Calculating the therapy doses and collaborating with the authorized user in the review of patients’ or human research subjects’ progress

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and consideration of the need to modify originally prescribed doses, as warranted by patients' or human research subjects' reaction to radiation; and

- iv. Post-administration follow up and review of case histories.
 - D. With the application the applicant shall provide the name of each authorized user to the Agency so the names can be listed on the registration form, and so that the Agency can determine whether the authorized user's training and experience satisfies the requirements in subsection (C).
 - E. Each registrant shall establish and maintain a written quality management program to provide high confidence that the radiation produced by the particle accelerator will be administered as directed by an authorized user. The quality management program shall include, at minimum, the tests and checks listed in Appendix A.
 - F. Each registrant shall ensure that a particle accelerator is calibrated by an authorized medical physicist who meets the training and experience qualifications in R12-1-711.
 - G. At the time of application for registration or when a therapy program is expanded to multiple sites, each applicant or registrant shall provide the Agency with a description of the quality management program, a listing of the professional staff assigned to the facility, and the expected ratio of patient workload to staff member for programs involving multiple therapy sites. If the staffing ratio exceeds the recommended levels in Radiation Oncology in Integrated Cancer Management, Report of the Inter-Society Council for Radiation Oncology, December 1991, the applicant shall provide to the Agency for approval the justification for the larger ratio and the safety considerations that have been addressed in establishing the program. This report is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. The report is available from the American Association of Physicists in Medicine: online at <http://www.aapm.org/pubs/reports>; print copies may be purchased from Medical Physics Publishing, 4513 Vernon Blvd., Madison, WI 53705; toll free at (800) 442-5778.
- Historical Note**
- Former Rule Section I.4; Former Section R12-1-904 repealed, new Section R12-1-904 adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).
- R12-1-905. Medical Particle Accelerator Equipment, Facility and Shielding, and Spot Checks**
- A. Equipment
 - 1. Leakage radiation
 - a. X-ray leakage radiation from the source housing assembly shall not exceed 0.1 percent of the maximum dose equivalent rate of the unattenuated useful beam.
 - b. Neutron leakage radiation from the source housing assembly shall not exceed 0.5 percent of the maximum dose equivalent rate of the unattenuated useful beam.
 - c. Leakage radiation measurements made at any point 1 meter from the path of the charged particle between its point of origin and the target, window or scattering foil shall meet the requirements of subsection (A)(1)(a) and (b) when computed as a percentage of the dose rate equivalent of the unattenuated useful beam measured at 1 meter from the virtual source. Leakage radiation measurements at each point shall be averaged over an area up to but not exceeding 100 square centimeters (15.5 square inches).
 - d. The registrant shall maintain, for inspection by the Agency, records that show leakage radiation measurements for the life of the operation.
 - 2. Beam limiting devices (not to include blocks or wedges). Adjustable or interchangeable beam limiting devices shall be provided and shall transmit no more than 2 percent of the useful beam for the portion of the useful beam that is to be attenuated by the beam limiting device. The neutron component of the useful beam shall not be included in this requirement. Measurements shall be averaged over an area up to but not exceeding 100 square centimeters (15.5 square inches) at the normal treatment distance.
 - 3. Filters. The following requirements apply to systems that use a system of wedge filters, interchangeable field flattening filters, or interchangeable beam scattering filters:
 - a. Irradiation shall not be possible until a selection of a filter has been made at the treatment control panel;
 - b. An interlock system shall be provided to prevent irradiation if the filter selected is not in the correct position;
 - c. An indication of the wedge filter orientation with respect to the treatment field shall be provided at the control panel, by direct observation, or by electronic means, when wedge filters are used;
 - d. A display shall be provided at the treatment control panel showing the filter or filters in use;
 - e. Each filter that is removable from the system shall be clearly identified as to that filter's material of construction, thickness, and the nominal wedge angle for wedge filters, or a record tracing these factors for each filter shall be maintained at the system console; and
 - f. An interlock shall be provided to prevent irradiation if any filter selection operation carried out in the treatment room does not agree with the filter selection operation carried out at the treatment control panel.
 - 4. Beam monitor. Equipment installed after the effective date of this Section shall be provided with at least one radiation detector in the radiation head. This detector shall be incorporated into a primary system so that all of the following criteria are met:
 - a. Each primary system shall have a detector that is a transmission detector and a full beam detector and that is placed on the patient side of any fixed added filters other than a wedge filter;
 - b. The detectors shall be removable only with tools and shall be interlocked to prevent incorrect positioning;
 - c. Each detector shall be capable of independently monitoring and controlling the useful beam;
 - d. Each detector shall form part of a dose-monitoring system from which the absorbed dose can be calculated at a reference point in the treatment volume;
 - e. Each dose monitoring system shall have a legible display at the treatment control panel that:
 - i. Maintains a reading until intentionally reset to zero;

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- ii. Has only one scale and no scale multiplying factors in replacement equipment; and
- iii. Utilizes a design such that increasing dose is displayed by increasing numbers and is designed so that, in the event of an overdosage of radiation, the absorbed dose may be accurately determined under all nominal conditions of use or foreseeable failures;
- f. In the event of power failure, the dose monitoring information required in subsection (A)(4) displayed at the control panel at the time of failure shall be retrievable in at least one system; and
- g. Selection and display of dose monitor units;
 - i. Irradiation shall not be possible until a selection of dose monitor units has been made at the treatment control panel.
 - ii. Each primary system shall terminate irradiation when the preselected number of dose monitor units has been detected by the system.
 - iii. Each secondary system shall terminate irradiation when 110 percent of the preselected number of dose monitor units has been detected by the system.
 - iv. It shall be possible to interrupt irradiation and equipment movements at any time from the operator's position at the treatment control panel. Following an interruption, it shall be possible to restart irradiation by operator action without any reselection of operating conditions. If any change is made of a preselected value during an interruption the equipment shall go to termination condition.
 - v. It shall be possible to terminate irradiation and equipment movements, or go from an interruption condition to termination conditions at any time from the operator's position at the treatment control panel.
- 5. Beam monitoring system. All accelerator systems shall be provided with a beam monitoring system in the radiation head capable of monitoring and terminating irradiation.
 - a. Each beam monitoring system shall have a display at the treatment control panel that registers the accumulated monitor units.
 - b. The beam monitoring system shall terminate irradiation if the preselected number of monitor units has been detected by the system.
 - c. For units with a secondary beam monitoring system, the primary beam monitoring system shall terminate irradiation if the preselected number of monitor units has been detected. The secondary beam monitoring system shall terminate irradiation if the primary system fails.
 - d. In the event of a power failure, the display information required in subsection (A)(5)(a) shall be retained in at least one system following the power failure.
 - e. An interlock device shall prevent irradiation if any beam monitoring system is inoperable.
 - f. For purposes of this rule:
 - i. "Beam monitoring system" means a system of devices that will monitor the useful beam during irradiation and will terminate irradiation if a preselected number of monitor units is accumulated.
 - ii. "Monitor unit" means a unit response from the beam monitoring system from which the absorbed dose can be calculated.
- 6. Treatment beam mode selection. In equipment capable of both x-ray and electron therapy:
 - a. Irradiation shall not be possible until a selection of radiation type is made at the treatment control panel;
 - b. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations indicated at the treatment control panel;
 - c. An interlock system shall be available and in operating condition on a therapy machine, and shall be used to prevent unwanted x-ray or electron irradiation when preparing for, or performing radiation therapy procedures. The interlock system need not be available for use, if the therapy machine is only used to make an image of an inanimate object; and
 - d. The radiation type selected shall be displayed at the treatment control panel before and during irradiation.
- 7. Treatment beam energy selection. Equipment capable of generating radiation beams of different energies shall meet all of the following requirements:
 - a. Irradiation shall not be possible until a selection of energy is made at the treatment control panel;
 - b. An interlock system shall be provided to ensure that the equipment can emit only the energy of radiation that is selected;
 - c. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations indicated at the treatment control panel; and
 - d. The energy selected shall be displayed at the treatment control panel before and during irradiation.
- 8. Selection of stationary or moving beam therapy. Equipment capable of both stationary and moving beam therapy modes shall meet all of the following requirements:
 - a. Irradiation shall not be possible until a selection of stationary beam therapy or moving beam therapy is made at the treatment control panel;
 - b. An interlock system shall be provided to ensure that the equipment can operate only in the mode that is selected;
 - c. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations indicated at the treatment control panel;
 - d. An interlock system shall be provided to terminate irradiation if the movement stops during moving beam therapy;
 - e. Moving beam therapy shall be so controlled that the required relationship between the number of dose monitor units and movement is obtained; and
 - f. The mode of operation shall be displayed at the treatment control panel.
- 9. Focal spot location and beam orientation. The registrant shall determine, or obtain from the manufacturer, the location in reference to an accessible point on the radiation head of all of the following:
 - a. The x-ray target or the virtual source of x-rays,
 - b. The electron window or the scattering foil, and
 - c. All possible orientations of the useful beam.
- 10. System checking facilities. Capabilities shall be provided for checking of all safety interlock systems.

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- B. Facility and shielding requirements.**
1. In addition to protective barriers sufficient to ensure compliance with R12-1-907, all of the following design requirements apply:
 - a. Except for entrance doors or beam interceptors, all the required barriers shall be fixed barriers;
 - b. The treatment control panel shall be located outside the treatment room;
 - c. Windows, mirrors, operable closed-circuit television, or other equivalent viewing systems shall be provided to permit continuous observation of the patient during irradiation and shall be so located that the operator may observe the patient from the treatment control panel;
 - d. Provision shall be made for two-way oral communication between the patient and the operator at the treatment control panel;
 - e. Each point of entry into the treatment room shall be provided with warning lights that will indicate when the useful beam is "on" in a readily observable position outside of the room; and
 - f. Interlocks shall be provided and shall result in all entrance doors being closed before treatment can be initiated or continued. If the radiation beam is interrupted by any door opening, it shall be possible to restore the machine to operation only by closing the door and reinitiating exposure by manual action at the control panel.
 2. An authorized medical physicist, trained and experienced in the principles of radiation protection, shall perform a radiation protection survey on all installations before human use and after any change in an installation that might produce a radiation hazard. The authorized medical physicist shall provide the survey results in writing to the individual in charge of the installation and transmit a copy of the survey results to the Agency.
 3. Calibrations.
 - a. Calibration of the therapy system, including radiation output calibration, shall be performed before placing new installations into operation for the purpose of irradiation of patients. Subsequent calibrations shall be made at intervals not to exceed 12 months, and after any change that may cause the calibration of the therapy system to change.
 - b. Calibration of the radiation output of the therapy beam shall be performed with an instrument that has been calibrated using a method that is traceable to the National Institute of Standards and Technology (NIST), within the preceding two years.
 - c. Calibration of a particle accelerator shall be performed by, or under the supervision of an authorized medical physicist who meets the qualification requirements specified in R12-1-711, and a copy of the calibration report shall be maintained by the registrant for inspection by the Agency.
 - d. Calibration of the therapy beam shall include, but not necessarily be limited to, all of the following determinations:
 - i. Verification that the equipment is operating within the design specifications concerning the light localizer, the side light and back pointer alignment with the isocenter, when applicable, variation in the axis of rotation for the table, gantry and jaw system, and beam flatness and symmetry at specific depths;
 - ii. The exposure rate or dose rate in air or at various depths of water for the range of field sizes used for each effective energy, and for each treatment distance used for radiation therapy;
 - iii. The congruence between the radiation field and the field defined by the localizing device;
 - iv. The uniformity of the radiation field and its dependency upon the direction of the useful beam; and
 - v. The calibration determinations above shall be provided in sufficient detail, to allow the absorbed dose to tissue in the useful beam to be calculated to within plus or minus 5 percent.
 - e. Records of calibrations shall be maintained for three years following the date the calibration was performed.
 - f. A copy of the current calibration report shall be available in the therapy facility for use by the operator, and the report shall contain the following information:
 - i. The action taken by the authorized medical physicist performing the calibration if it indicates a change has occurred since the last calibration,
 - ii. A listing of the persons informed of the change in calibration results, and
 - iii. A statement as to the effect the change in calibration has had on the therapy doses prior to the current calibration finding.
- C. Spot checks.**
1. The spot check procedures shall be in writing and shall have been developed by an authorized medical physicist trained and experienced in performing calibrations.
 2. The measurements taken during spot checks shall demonstrate the degree of consistency of the operating characteristics which can affect the radiation output of the system or the radiation dose delivered to a patient during a therapy procedure.
 3. The written spot check procedure shall indicate the frequency at which tests or measurements are to be performed, not to exceed monthly.
 4. The spot check procedure shall note conditions that require recalibration of the therapy system before further human irradiation.
 5. Records of spot checks shall be maintained and available for inspection by the Agency for three years following the spot check measurements. Records of spot checks not performed by an authorized medical physicist shall be signed by an authorized medical physicist within 15 days of the spot check.
- D. Operating procedures.**
1. Only the patient shall be in the treatment room during irradiation.
 2. If a patient must be held in position during treatment only, mechanical supporting or restraining devices shall be used for this purpose.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 8, 1986 (Supp. 86-4). New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-906. Limitations

- A. A registrant shall not permit an individual to act as:
1. A particle accelerator operator of any type unless the individual:
 - a. Has received copies of and instruction in this Article and the registrant's operating and emergency procedures,
 - b. Demonstrates an understanding of the material, and
 - c. Has demonstrated competence in the use the particle accelerator, related equipment, and survey instruments that will be employed during the operation of the particle accelerator;
 2. A medical particle accelerator operator unless the individual is certified as required in A.R.S. § 32-2811 or the operator meets the requirements in R12-1-603(B); or
 3. An industrial particle accelerator operator unless the individual has been instructed in radiation safety.
- B. A registrant shall provide either the Radiation Safety Committee or the Radiation Safety Officer with the authority to terminate operations at a particle accelerator facility if this is necessary to protect health and safety or property.
- C. If equipment is capable of both stationary and moving beam therapy, the registrant shall ensure that:
1. Irradiation is not possible unless either stationary or moving beam therapy has been selected at the control panel,
 2. An interlock is provided to ensure that the machine will operate only in the mode that has been selected,
 3. An interlock is provided that terminates irradiation if the gantry fails to move properly during moving beam therapy,
 4. A means is provided to prevent movement during stationary therapy, and
 5. The mode of operation is displayed at the control panel.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-907. Shielding and Safety Design

- A. An authorized medical physicist experienced in the principles of radiation protection and installation design shall be consulted in the design of a particle accelerator installation and called upon to perform a radiation survey when the accelerator is first capable of producing radiation. The registrant shall provide a copy of the installation radiation survey to the Agency before an Agency inspection conducted according to R12-1-914.
- B. The registrant shall shield each particle accelerator installation with the primary and secondary protective barriers necessary to comply with R12-1-408 and R12-1-416.
- C. At the time of application for registration and before treatment of the first patient, the applicant shall provide to the Agency a copy of an installation report, signed by the contractor who installed required shielding material recommended by the authorized medical physicist who performed the shielding calculations for the particle accelerator facility.
- D. As part of the annual radiation protection program review required in R12-1-407(C), the registrant shall document installed facility shielding and other radiation exposure controls, review patient workload, and note associated changes, if any, in public exposure that are the result of installed facility shielding, increased workload, and other radiation exposure controls in use at the time of the review.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsection (A) effective Aug. 8, 1986 (Supp. 86-4).

Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-908. Particle Accelerator Controls and Interlock Systems

A registrant shall ensure that:

1. Instrumentation, readouts and controls on the particle accelerator control panel are clearly identified and easily discernible;
2. All entrances into the area that contains the particle accelerator room, target room, or other high radiation area, are provided with interlocks that shut down the machine if an entrance door is opened;
3. If an interlock system connected to an entrance door that provides access to the therapy suite has been tripped, it is not possible to resume operation of the particle accelerator by resetting the interlock switch at the entrance where it had been tripped;
4. Each safety interlock is on a circuit that allows it to operate independently of all other safety interlocks;
5. If possible, the interlock system is fail-safe in design, so that any defect or component failure in the interlock system prevents operation of the particle accelerator; and
6. A scram button or other emergency power cutoff switch is located and easily identifiable in the area that contains the particle accelerator. The registrant shall ensure that the scram button prevents persons from restarting the particle accelerator at the accelerator control panel without resetting the button or switch.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-909. Warning Systems

A registrant shall ensure that:

1. High radiation areas and entrances to the high radiation areas in medical facilities are equipped with a continuously-operating warning light system that operates when, and only when, radiation is produced;
2. High radiation areas and entrances to the high radiation areas in nonmedical facilities are equipped with an easily-observable flashing or rotating warning light system that operates when, and only when, radiation is produced;
3. High radiation areas associated with nonmedical particle accelerators have an audible warning device that is activated for 15 seconds before creation of the high radiation area; and the warning device is clearly discernible in all high radiation areas and all radiation areas; and
4. High radiation areas associated with any particle accelerator are posted according to R12-1-428 and R12-1-429.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-910. Operating Procedures

- A. A registrant shall secure from use a particle accelerator when it is not being used to prevent unauthorized use.
- B. A particle accelerator operator shall use the switch on the control panel to turn the accelerator beam on and off during normal operations. The safety interlock system may be used to turn off the accelerator beam in emergencies.

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- C. A registrant shall ensure that all safety and warning systems, including interlocks, are tested for proper operation at intervals not to exceed three months, and maintain a record of each test for Agency inspection for at least three years from the date of the test.
- D. A registrant shall keep current electrical circuit diagrams of a particle accelerator and the associated interlock systems, and maintain the diagrams for inspection by the Agency.
- E. A registrant shall not bypass an interlock unless the by-pass is:
 1. Authorized in writing by the Radiation Safety Committee or Radiation Safety Office,
 2. Recorded in a permanent log with a notice of the by-pass posted at any affected interlock and at the control panel, and
 3. Terminated as soon as possible.
- F. A registrant shall maintain a copy of the current operating and emergency procedures at the particle accelerator control panel.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsection (D) effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-911. Radiation Surveys

- A. The registrant shall ensure that a portable survey instrument is available at all times in a particle accelerator facility.
- B. An authorized medical physicist shall:
 1. Check the operation of the portable survey instrument required in subsection (A), using a known radiation source, before each use;
 2. Perform and document a radiation protection survey when changes have been made in shielding, operation, equipment, or occupancy of adjacent areas;
 3. For particle accelerator facilities greater than 30 Mev, establish a program of radiation protection surveys that will evaluate the airborne radiation hazards, and ensure that the particulate radioactivity present in the accelerator facility will not result in personnel exposure that exceeds the limits in Article 4; and
 4. Perform radiation protection surveys, including smear surveys of the particle accelerator facility, as prescribed in the written procedures established by the Radiation Safety Officer of the particle accelerator facility and approved by the Agency at the time of application for registration.
- C. The registrant shall maintain the following records:
 1. Radiation protection surveys required in subsection (B)(2), and the associated facility description, required in R12-1-202, until the registration is terminated; and
 2. Records of the surveys required in subsections (B)(3) and (4) for three years following the measurement.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-912. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Amended

effective Aug. 8, 1986 (Supp. 86-4). Amended effective June 13, 1997 (Supp. 97-2). Section repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-913. Misadministration

- A. For purposes of this rule "misadministration" means:
 1. A therapeutic radiation dose from a machine:
 - a. Delivered to the wrong patient;
 - b. Delivered using the wrong mode of treatment;
 - c. Delivered to the wrong treatment site; or
 - d. Delivered in one week to the correct patient, using the correct mode, to the correct therapy site, but greater than 130 percent of the prescribed weekly dose; or
 2. A therapeutic radiation dose from a machine with errors in the calibration, time of exposure, or treatment geometry that result in a calculated total treatment dose differing from the final, prescribed total treatment dose by more than 20 percent, except for treatments given in 1 to 3 fractions, in which case a difference of more than 10 percent constitutes a misadministration.
- B. Reports of therapy misadministration
 1. Within 24 hours after discovery of a misadministration, a registrant shall notify the Agency by telephone. The registrant shall also notify the referring physician of the affected patient and the patient or a responsible relative or guardian, unless the referring physician personally informs the registrant either that he or she will inform the patient, or that in his or her medical judgment, telling the patient or the patient's responsible relative or guardian would be harmful to one or the other, respectively. If the referring physician or the patient's responsible relative or guardian cannot be reached within 24 hours, the registrant shall notify them as soon as practicable. The registrant shall not delay medical care for the patient because of notification problems.
 2. Within 15 days following the verbal notification to the Agency, the registrant shall report, in writing, to the Agency and individuals notified under subsection (B)(1). The written report shall include the registrant's name, the referring physician's name, a brief description of the event, the effect on the patient, the action taken to prevent recurrence, whether the registrant informed the patient or the patient's responsible relative or guardian, and if not, why not. The report shall not include the patient's name or other information that could lead to identification of the patient.
 3. Each registrant shall maintain records of all misadministrations for Agency inspection. The records shall:
 - a. Contain the names of all individuals involved in the event, including:
 - i. The physician,
 - ii. The allied health personnel,
 - iii. The patient,
 - iv. The patient's referring physician,
 - v. The patient's identification number if one has been assigned,
 - vi. A brief description of the event,
 - vii. The effect on the patient, and
 - viii. The action taken to prevent recurrence.
 - b. Be maintained for three years beyond the termination date of the affected registration.

Historical Note

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final

rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-914. Initial Inspections of Particle Accelerators Used in the Practice of Medicine

The Agency shall inspect a particle accelerator, used in the practice of medicine, before its initial use to treat human disease.

Historical Note

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

Appendix A. Quality Control Program

- A. Mechanical Tests**
1. Patient support assembly motions
 2. Gantry angle indicators
 3. Optical distance indicators
 4. Alignment lights
 5. Congruence of radiation beam and light field
 6. Accuracy of field size indicators
 7. Mechanical isocenter- gantry and collimator
 8. Mechanical interlocks
- B. Radiation Beam Tests**
1. Machine operating parameters,
 2. Dose per monitor unit for x-ray and electron beams,
 3. Dose per degree for moving beam therapy,
 4. Radiation isocenter,
 5. Flatness and symmetry,
 6. Wedge transmission factors,
 7. Shadow tray transmission factors,
 8. Energy check on central axis,
 9. Radiation output versus field size.
- C. Control Panel Checks**
1. Radiation "ON" condition,
 2. Indicator lamp check,
 3. Computer control of accelerator,
 4. Interlock display,
 5. Digital display,
 6. Analog display,
 7. Status display,
 8. Reset display.
- D. Facility Checks**
1. Patient audio-visual communication,
 2. Entrance door interlock,
 3. Warning lights,
 4. Emergency off button.
- E. Dose Output Check**
1. Each registrant shall use the services of a third party authorized medical physicist or third party TLD system to verify the accelerator's radiation output every two years.
 2. If the output check is not within plus or minus 5 percent of the calibrated output, the accelerator shall be recalibrated and the discrepancy investigated.
 3. Records of output checks shall be maintained for three years.
- F. Patient Dosimetry Calculation Checks**
1. Calculation of patient treatment times
 2. Computer calculation of patient treatment times

Historical Note

New Appendix made by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

ARTICLE 10. NOTICES, INSTRUCTIONS, AND REPORTS TO RADIATION WORKERS; INSPECTIONS

R12-1-1001. Purpose and Scope

This Article establishes requirements for notices, instructions, and reports by licensees or registrants to individuals working for a licensee or registrant. This Article explains the options available to these individuals in connection with ARRA inspections of licensees or registrants regarding radiological working conditions. The rules in this Article apply to all persons who receive, possess, use, own, or transfer sources of radiation licensed or registered by the ARRA.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1002. Posting of Notices for Workers

- A.** Each licensee or registrant shall post current copies of the following documents:
1. The rules in this Chapter;
 2. The license, certificate of registration, conditions, or documents incorporated into the license or registration by reference, and any amendments to the license or registration;
 3. The operating procedures applicable to work under the license or registration;
 4. Any notice of violation involving radiological working conditions, proposed imposition of a civil penalty, or order issued under 12 A.A.C. 1, Article 12, and any response from the licensee or registrant.
- B.** If posting of a document specified in subsections (A)(1), (2) and (3) is not practicable, the licensee or registrant may post a notice which describes the document and states where it may be examined.
- C.** Form ARRA-6 (shown following R12-1-1008), "Notice to Employees" shall be posted by each licensee or registrant wherever individuals work in or frequent any portion of a restricted area.
- D.** Each licensee or registrant shall post documents, notices, or forms, as required by this Section, so that they are conspicuous and appear in a sufficient number of places to permit individuals engaged in work under the license or registration to observe them on the way to or from any particular work location to which the document applies and shall replace any document if it is defaced or altered.
- E.** Agency documents posted as required in subsection (A)(4) shall be posted within two working days after receipt of the documents from the Agency; the licensee's or registrant's response, if any, shall be posted within two working days after dispatch from the licensee or registrant. The documents shall remain posted for a minimum of five working days or until action correcting the violation has been completed, whichever is later.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1003. Instructions for Workers

- A.** A licensee or registrant shall ensure that each individual who, in the course of employment, is likely to receive in a year an occupational dose in excess of 1 mSv (100 mrem), receives instruction in all of the following subjects:
1. Storage, transfer, or use of radiation and radioactive material;

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2. Health protection problems associated with exposure to radiation or radioactive material, precautions or procedures to minimize exposure, and purposes and functions of protective devices;
 3. Applicable provisions in Agency rules, licenses, and registrations that protect of personnel from exposure to radiation or radioactive material, with an emphasis on the duties of workers;
 4. The duty to promptly report to the licensee or registrant any condition that may lead to or cause a violation of a provision in an Agency rule, license, or registration or unnecessary exposure to radiation or radioactive material;
 5. Correct response to warnings in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive material; and
 6. Radiation exposure reports that a worker may request according to R12-1-1004.
- B.** In determining whether subsection (A) applies to an individual, a licensee or registrant shall take into consideration assigned activities during normal and abnormal situations that involve exposure to radiation or radioactive material and could reasonably be expected to occur during the life of a facility. The licensee or registrant shall provide instruction that is commensurate with potential radiological health protection problems present in the work place.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-1004. Notifications and Reports to Individuals

- A.** A licensee or registrant shall report radiation exposure data for an individual and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body to the individual as specified in this Section. The information reported shall include data and results obtained under Agency rules, orders, or license conditions, as shown in records maintained by the licensee or registrant. Each notification and report shall be in writing; include appropriate identifying data, such as the name of the licensee or registrant, the name of the individual, and the individual's Social Security number; include the individual's exposure information; and contain the following statement:
- "This report is furnished to you under the provisions of 12 A.A.C. 1. You should preserve this report for future reference."
- B.** Each licensee or registrant shall make dose information available to workers as shown in records maintained by the licensee or registrant under the provisions of Article 4. Each licensee or registrant shall provide annual notification of exposure to radiation or radioactive material for each worker, as shown in records maintained by the licensee or registrant under R12-1-419(E) if:
1. The individual's occupational dose exceeds 1 mSv (100 mrem) TEDE or 1 mSv (100 mrem) to any individual organ or tissue; or
 2. The individual requests his or her annual dose report.
- C.** At the request of a worker formerly engaged in work controlled by the licensee or the registrant, each licensee or registrant shall furnish to the worker a report of the worker's exposure to radiation or radioactive material. The report shall be furnished within 30 days from the time the request is made, or within 30 days after the exposure of the individual has been determined by the licensee or registrant, whichever is later; the

report shall cover, within the period of time specified in the request, each calendar quarter in which the worker's activities involved exposure to radiation from radioactive material licensed by, or radiation machines registered with, the Agency; and the report shall include the dates and locations of work under the license or registration in which the worker participated during this period.

- D.** Reports to individuals of their exposure to radiation shall be made according to R12-1-446.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3) Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-1005. Licensee, Registrant, and Worker Representation During Agency Inspection

- A.** As a condition of licensure or registration, each licensee or registrant shall afford to the Agency, at all reasonable times and without undue delay, an opportunity to inspect materials, machines, activities, facilities, premises, and records.
- B.** During an inspection, the licensee or registrant shall permit Agency inspectors to consult privately with workers as specified in Section R12-1-1006. The licensee or registrant may accompany Agency inspectors during other phases of an inspection.
- C.** A worker authorized to consult with an Agency inspector under R12-1-1006 may authorize another individual to represent the worker's interests during the Agency inspection. The licensee or registrant shall notify the inspectors of the worker's authorization and give the worker's representative an opportunity to accompany the inspectors during the inspection of physical working conditions.
- D.** Each worker's representative shall be routinely engaged in work under control of the licensee or registrant or shall have received instructions under R12-1-1003.
- E.** Different representatives of licensees or registrants and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the inspection. However, only one worker's representative at a time may accompany the inspectors.
- F.** With the approval of the licensee or registrant and the worker's representative an individual who is not routinely engaged in work under control of the licensee or registrant, for example, a consultant to the licensee or registrant or to the worker's representative, shall be afforded the opportunity to accompany Agency inspectors during the inspection of physical working conditions.
- G.** Notwithstanding the other provisions of this Section, Agency inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information the worker's representative for that area shall be an individual previously authorized by the licensee or registrant to enter that area. With regard to areas containing information classified by an agency of the U.S. Government in the interest of national security, any individual who accompanies an inspector may have access to such information only if authorized by the classifying agency.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

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R12-1-1006. Consultation with Workers During Inspections

- A. A licensee or registrant shall afford Agency inspectors talking to a licensee or registrant representative the opportunity to consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of Agency rules, licenses, and registrations to the extent the inspectors deem consultation necessary for conducting an effective and thorough inspection.
- B. During the course of an inspection, any worker may privately bring to the attention of the inspectors, either orally or in writing, any past or present condition which the worker has reason to believe may have contributed to or caused any violation of the Act, these rules, or a license or registration condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material or a registered radiation machine under the licensee's or registrant's control. If this notification is in writing, the worker shall comply with the requirements of R12-1-1007(A).
- C. The provisions of R12-1-1006(B) shall not be interpreted as authorization to disregard instructions required by R12-1-1003.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1007. Inspection Requests by Workers

- A. Any worker or representative of workers who believes that a violation of the Act, these rules, license, or registration conditions exists, or has occurred with regard to radiological working conditions in which the worker is engaged, may request an inspection of the facility by the Agency. Any request shall be in writing, addressed to the Director, set forth the specific grounds for the request, and be signed by the worker or representative of the workers. The Agency shall provide a copy to the licensee or registrant no later than at the time of inspection except that, upon the request of the worker, the Agency shall protect the worker's name and the name of individuals referred

to in the request to the extent authorized by law, except for good cause shown.

- B. If, upon receipt of a request for inspection, the Agency's Director determines that there are reasonable grounds to believe that the alleged violation exists or has occurred, the Director shall initiate an inspection as soon as practicable, to determine if the alleged violation exists or has occurred. Inspections performed under this subsection need not be limited to matters referred to in the complaint.
- C. A licensee or registrant shall not discharge or in any manner discriminate against any worker because the worker has filed any complaint or caused to be instituted any proceeding under these rules or has testified or is about to testify in the instituted proceeding or because the worker exercises on behalf of the worker or others, any option afforded by this Article.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1008. Inspection not Warranted; Review

If the Agency determines, with respect to a complaint under R12-1-1007, that an inspection is not warranted or there are no reasonable grounds to believe that a violation exists or has occurred, the Agency shall notify the complainant in writing of the determination. The complainant may obtain review of the determination by submitting a written request for hearing to the Agency. The Agency shall provide for a hearing before the Radiation Regulatory Hearing Board under 12 A.A.C. 1, Article 12 and A.R.S. Title 41, Chapter 6, Article 10.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). R12-1-1008 updated to reflect a corrected Arizona Revised Statute article number (Supp. 07-1).

Exhibit A. Form ARRA-6 (2012) Notice to Employees
ARRA-6 (2012) ARIZONA RADIATION REGULATORY AGENCY

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION; NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS; INSPECTIONS

In Article 4 of the Arizona Radiation Regulatory Agency (ARRA) rules for the Control of Radiation, the Arizona Radiation Regulatory Agency has established standards for your protection against radiation hazards. In Article 10 of the rules for the Control of Radiation, the Arizona Radiation Regulatory Agency has established certain provisions for the options of workers engaged in work under an ARRA license or registration.

YOUR EMPLOYER'S RESPONSIBILITY

Your employer is required to -

1. Apply these rules to work involving sources of radiation.
2. Post or otherwise make available to you a copy of the Arizona Radiation Regulatory Agency rules, licenses, and operating procedures which apply to work you are engaged in, and explain their provisions to you.
3. Post notice of violation involving radiological working conditions, proposed imposition of civil penalties, and orders.

YOUR RESPONSIBILITY AS A WORKER

You should familiarize yourself with those provisions of the Arizona Radiation Regulatory Agency rules and the operating procedures which apply to the work you are engaged in. You should observe their provisions for your own protection and protection of your co-workers.

WHAT IS COVERED BY THESE RULES

1. Limits on exposure to radiation and radioactive material in restricted and unrestricted areas;
2. Measures to be taken after accidental exposure;
3. Personnel monitoring, surveys, and equipment;
4. Caution signs, labels, and safety interlock equipment;
5. Exposure records and reports;
6. Options for workers regarding ARRA inspections; and
7. Related matters.

REPORTS ON YOUR RADIATION EXPOSURE HISTORY

1. The Arizona Radiation Regulatory Agency rules require that your employer give you a written report if you receive an exposure in excess of any applicable limit set forth in the rules or in the license. The basic limits for

exposure to employees are set forth in Article 4 of the rules. These Sections specify limits on exposure to radiation and exposure to concentrations of radioactive material in air and water.

2. If you work where personnel monitoring is required, and if you request information on your radiation exposures,
 - a. Your employer must give you a written report, upon termination of your employment, of your radiation exposures; and
 - b. Your employer must advise you annually of your exposure to radiation.

INSPECTIONS

All licensed or registered activities are subject to inspection by representatives of the Arizona Radiation Regulatory Agency. In addition, any worker or representative of workers who believes that there is a violation of the regulations issued thereunder, or the terms of the employer's license or rules with regard to radiological working conditions in which the worker is engaged, may request an inspection by sending a notice of the alleged violation to the Arizona Radiation Regulatory Agency. The request must set forth the specific grounds for the notice and must be signed by the worker on his own behalf or as a representative of the workers. During inspections, ARRA inspectors may confer privately with workers, and any worker may bring to the attention of the inspectors any past or present condition which he believes contributed to or caused any violation as described above.

INQUIRIES

Inquiries dealing with the matters outlined above can be sent to the:
ARIZONA RADIATION REGULATORY AGENCY

POSTING REQUIREMENT

IN ACCORDANCE WITH A.A.C. R12-1-1002, COPIES OF THIS NOTICE SHALL BE POSTED IN SUCH A MANNER TO PERMIT EMPLOYEES WORKING IN OR FREQUENTING ANY PORTION OF A RESTRICTED AREA, USED FOR ACTIVITIES LICENSED OR REGISTERED PURSUANT TO ARTICLE 2 OR ARTICLE 3 OF THE AGENCY'S RULES, TO OBSERVE A COPY OR COPIES ON THE WAY TO OR FROM THEIR WORK AREA.

Historical Note

Exhibit A amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

ARTICLE 11. INDUSTRIAL USES OF X-RAYS, NOT INCLUDING ANALYTICAL X-RAY SYSTEMS

R12-1-1101. Repealed

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 97-2).

R12-1-1102. Definitions

"Access point" means any door or cover that is designed to be removed or opened for maintenance or service purposes, opened using tools, and used to provide access to the interior of a cabinet x-ray unit.

"Annual refresher safety training" means a review provided by the registrant for its employees on radiation safety aspects of industrial radiography. The review shall include, as applicable, the results of internal inspections, new procedures or equipment, new or revised statutes or rules, accidents, or errors that have occurred, and provide opportunities for employees to ask safety questions.

"Aperture" means any opening in the outside surface of a cabinet x-ray unit, other than a port, which remains open during generation of x-radiation.

"Door" means any barrier that is designed to be movable or opened for routine operation purposes, rather than opened

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using tools, and used to provide access to the interior of the cabinet x-ray unit.

“Ground fault” means an accidental electrical grounding of an electrical conductor.

“Hands-on experience” means the accumulation of knowledge or skill in any area relevant to radiography.

“Port” means any opening in the outside surface of a cabinet x-ray unit that is designed to remain open, during generation of x-rays, for conveying material that is being irradiated into and out of the cabinet, or for partial insertion of an object for irradiation if the dimensions of the object do not permit complete insertion into the cabinet x-ray unit.

“Practical examination” means a demonstration, through practical application of safety rules and principles of industrial radiography, which includes use of all radiography equipment and tests knowledge of radiography procedures.

“Radiographic operations” means all activities associated with use of a radiographic x-ray system. This includes performing surveys to confirm the adequacy of boundaries, setting up equipment, and conducting any activity inside restricted area boundaries.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 9702). New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

R12-1-1103. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 97-2).

R12-1-1104. Registration Requirements

- A. The Agency shall review an application for registration of a radiation machine for use in industrial radiography and approve the registration if an applicant meets all of the following requirements:
1. The applicant satisfies the general requirements in Article 2 and any special requirements contained in this Article,
 2. The applicant submits a program for training radiographer’s assistants that complies with R12-1-1146, and
 3. The applicant submits procedures for verifying and documenting the certification status of each radiographer and for ensuring that the certification remains valid.
- B. An applicant shall submit written operating and emergency procedures, as prescribed in R12-1-1128.
- C. An applicant shall submit a description of a program for review of job performance of each radiographer and radiographer’s assistant at intervals that do not exceed six months, as prescribed in R12-1-1146(E).
- D. An applicant shall submit a description of the applicant’s overall organizational structure as it applies to radiation safety responsibilities in industrial radiography, including specified delegation of authority and responsibility.
- E. An applicant shall submit and list the qualifications of each individual designated as an RSO under R12-1-1120 and indicate which designee is responsible for ensuring that the registrant’s radiation safety program is implemented.
- F. If an applicant intends to perform “in-house” calibrations of survey instruments, the applicant shall describe each calibration method to be used, the relevant experience of each person who will perform a calibration, and procedures to ensure that all calibrations are performed according to the procedures prescribed in R12-1-1108.
- G. An applicant shall identify and describe the location of all field stations and permanent radiographic installations.

- H. An applicant shall identify each location where records required by this Chapter will be maintained.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 97-2). New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1105. Reserved**R12-1-1106. Equipment Performance**

A registrant shall ensure that each x-ray machine has a lock or other security system designed to prevent unauthorized use or accidental production of radiation and is secured against unauthorized use at all times, except when under the direct surveillance of a radiographer or radiographer’s assistant.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1107. Reserved**R12-1-1108. Radiation Survey Instruments**

- A. A registrant shall maintain at least two calibrated and operable radiation survey instruments at each location where sources of radiation are present to make radiation surveys required by this Article and Article 4 of this Chapter. Instrumentation required by this Section shall be capable of measuring a range from 0.02 millisieverts (2 millirem) per hour through 0.01 sievert (1 rem) per hour.
- B. A registrant shall ensure that each radiation survey instrument required under subsection (A) is calibrated:
1. At intervals that do not exceed six months, and after instrument servicing, except for battery changes;
 2. For linear scale instruments, at two points located approximately one-third and two-thirds of full-scale on each scale; for logarithmic scale instruments, at mid-range of each decade, and at two points of at least one decade; and for digital instruments, at 3 points between 0.02 and 10 millisieverts (2 and 1000 millirem) per hour; and
 3. So that an accuracy within plus or minus 20% of the calibration source can be demonstrated at each point checked.
- C. A registrant shall make a record each time a radiation survey instrument is calibrated, and maintain each record for three years after it is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1109. Reserved**R12-1-1110. Quarterly Inventory**

- A. A registrant shall conduct a quarterly physical inventory to account for all x-ray machines received and possessed under the registration.
- B. A registrant shall maintain a record of the quarterly inventory required under subsection (A) for three years after it is made.
- C. The record required by subsection (B) shall include the date of the inventory, name of the individual who conducted the inventory, location of each x-ray machine, and manufacturer, model, and serial number of each x-ray machine.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

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R12-1-1111. Reserved**R12-1-1112. Utilization Logs**

- A. A registrant shall maintain for each x-ray machine a utilization log that provides all of the following information:
1. A description, including the make, model, and serial number of each x-ray machine;
 2. The identity and signature of the radiographer using the machine; and
 3. The plant or site where the machine is used and dates of use, including each date when the machine is removed from or returned to storage.
- B. A registrant shall retain a log required by subsection (A) for three years after the log is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1113. Reserved**R12-1-1114. Inspection and Maintenance of Radiation Machines, Survey Instruments, and Associated Equipment**

- A. A registrant shall perform visual and operability checks on survey instruments and radiation machines before use on each day the equipment is to be used to ensure that the equipment is in good working condition and required labeling is present. Survey instrument operability checks shall be performed using check sources or other authorized means. If equipment problems are found, the registrant shall remove the equipment from service until it is repaired.
- B. A registrant shall have written inspection and maintenance procedures for radiation machines and survey instruments that require inspection and maintenance, at intervals that do not exceed three months or before first use of the equipment and to ensure the proper functioning of components important to safety. Replacement components shall meet design specifications. If equipment problems are discovered, the registrant shall remove the equipment from service until the equipment is repaired.
- C. A registrant shall maintain records of equipment problems found in daily checks and quarterly inspections and retain each record for three years after it is made. The record shall include the date of the check or inspection, name of the inspector, equipment involved, any problems found, and any repair or needed maintenance performed.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1115. Reserved**R12-1-1116. Surveillance**

During each radiographic operation a radiographer, or the radiographer's assistant as permitted by R12-1-1118, shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, except at permanent radiographic installations where all entrances are locked and the registrant is in compliance with R12-1-1136.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1117. Reserved**R12-1-1118. Industrial Radiographic Operations**

- A. If industrial radiography is performed at a location other than a permanent radiographic installation, a registrant shall ensure that the radiographer is accompanied by at least one other radiographer or radiographer's assistant, qualified under R12-

1-1146. The additional radiographer or radiographer's assistant shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. The registrant shall not allow industrial radiography if only one qualified individual is present.

- B. A registrant shall ensure that each industrial radiographic operation is conducted at a location of use authorized on the registration of a permanent radiographic installation, unless another permanent location is specifically authorized by the Agency.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1119. Reserved**R12-1-1120. Radiation Safety Officer (RSO)**

- A. A registrant shall have a radiation safety officer (RSO) who is responsible for implementing procedures and regulatory requirements in the daily operation of the radiation safety program.
- B. A registrant shall ensure that the RSO has satisfied the following minimum requirements:
1. The training and testing requirements in R12-1-1146;
 2. Two thousand hours of hands-on experience as a qualified radiographer for an industrial radiographic operation; and
 3. Formal training in the establishment and maintenance of a radiation safety program.
- C. A registrant may use an individual in the position of RSO who does not have the training and experience required in subsection (B), if the registrant provides the Agency with a description of the individual's training and experience in the field of ionizing radiation and training with respect to the establishment and maintenance of a radiation safety protection program.
- D. The specific duties and authorities of the RSO include, but are not limited to:
1. Establishing and overseeing operating, emergency, and ALARA procedures as required in Article 4 of this Chapter, and reviewing the procedures every year to ensure that they conform to current Agency rules and registration conditions;
 2. Overseeing and approving all phases of the training program for radiographic personnel, ensuring that appropriate and effective radiation protection practices are taught;
 3. Overseeing radiation surveys and associated documentation to ensure that the surveys are performed in accordance with the rules and taking corrective measures if levels of radiation exceed established action limits;
 4. Overseeing the personnel monitoring program to ensure that monitoring devices are calibrated and used properly by occupationally exposed personnel and ensuring that records are kept of the monitoring results and timely notifications are made as required in R12-1-444; and
 5. Overseeing operations to ensure that they are conducted safely and instituting corrective actions, which may include ceasing operations if necessary.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1121. Reserved**R12-1-1122. Form of Records**

A registrant shall maintain records in accordance with R12-1-405.

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Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1123. Reserved**R12-1-1124. Reserved****R12-1-1125. Reserved****R12-1-1126. Posting**

A registrant shall post any area in which industrial radiography is being performed as required by R12-1-429. Exceptions listed in R12-1-430 do not apply to industrial radiographic operations.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1127. Reserved**R12-1-1128. Operating and Emergency Procedures**

A. A registrant shall have operating and emergency procedures that include, at minimum, instructions in the following, as applicable:

1. Use of radiation machines, so that persons are not exposed to radiation that exceeds the limits in Article 4 of this Chapter;
2. Methods and occasions for conducting radiation surveys;
3. Methods for controlling access to radiographic areas;
4. Methods and occasions for locking and securing a radiation machine;
5. Personnel monitoring and associated equipment;
6. Inspection, maintenance, and operability checks of a radiation machine and survey instruments;
7. Actions to be taken immediately by radiography personnel if a pocket dosimeter is found to be off-scale or an alarm rate meter sounds an alarm;
8. Procedures for identifying and reporting defects and non-compliance, as required by R12-1-448;
9. The procedure for notifying the RSO and the Agency in the event of an accident;
10. Minimizing exposure of persons in the event of an accident, and
11. Maintenance of records.

B. The registrant shall maintain copies of current operating and emergency procedures until the Agency terminates the registration. Superseded procedures shall be maintained for three years after a change is made. Additionally, records shall be maintained in accordance with R12-1-1138.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1129. Reserved**R12-1-1130. Personnel Monitoring**

A. An individual shall not act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, the individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm rate meter, and either a film badge, a TLD, or an optically stimulated luminescence (OSL) dosimeter. At permanent radiography installations where other required alarm or warning devices are in routine use, an alarm rate meter is not required.

1. A registrant shall provide pocket dosimeters that have a range from zero to 2 millisieverts (200 millirems) and ensure that the dosimeters are recharged at the start of each shift. Electronic personnel dosimeters are permitted in place of ion-chamber pocket dosimeters.

2. The registrant shall assign a film badge, TLD, or OSL dosimeter to one individual, who shall wear the assigned equipment.
3. The registrant shall replace film badges at least monthly and replace TLDs or OSL dosimeters at least quarterly.
4. After replacement, the registrant shall ensure that each film badge or TLD is processed as soon as possible.

B. A radiographer or radiographer's assistant shall record exposures noted from direct reading dosimeters, such as pocket dosimeters or electronic personnel dosimeters, at the beginning and end of each shift.

C. A registrant shall check each pocket dosimeter or electronic personnel dosimeter at least yearly for correct response to radiation, and discontinue use of a dosimeter if it is not accurate within plus or minus 20% of the true radiation exposure.

D. If an individual's pocket dosimeter has an off-scale reading, or the electronic personnel dosimeter reads greater than 2 millisieverts (200 millirems), and radiation exposure cannot be ruled out as the cause, a registrant shall send the individual's film badge, TLD, or OSL dosimeter for processing within 24 hours. The registrant shall not allow the individual to work with a radiation machine until the individual's radiation exposure is determined. Using the information from the badge or dosimeter, the RSO or the RSO's designee shall calculate the affected individual's cumulative radiation exposure, as prescribed in Article 4 of this Chapter and include the results in records maintained in accordance with subsection (G).

E. If an individual's monitoring device is lost or damaged, the individual shall cease work immediately until the registrant provides a replacement film badge, TLD, or OSL dosimeter and the RSO or the RSO's designee calculates the exposure for the time period from issuance to discovery of a lost or damaged film badge, TLD, or OSL dosimeter. The registrant shall include the calculated exposure and the time period for which the film badge, TLD, or OSL dosimeter was lost or damaged in the records maintained in accordance with subsection (G).

F. For each alarm rate meter a registrant shall ensure that:

1. At the start of a shift each individual with an alarm rate meter checks that the alarm functions (sounds) before using the device;
2. Each device is set to give an alarm signal at a preset dose rate of 5 mSv/hr (500 mrem/hr) with an accuracy of plus or minus 20% of the true radiation dose rate;
3. A special means is necessary to change the preset alarm function on the device; and
4. Each device is calibrated at periods that do not to exceed 12 months for correct response to radiation

G. Each registrant shall maintain the following personnel monitoring records:

1. Each dosimeter reading and the yearly operability check required by subsections (B) and (C) for three years after each record is made;
2. A record of each alarm rate meter calibration for three years after the record is made;
3. Any report received from the film badge, TLD, or OSL processor. The registrant shall maintain these records until the Agency terminates the registration; and
4. Any estimation of an exposure evidenced by an off-scale personnel direct-reading dosimeter or a lost or damaged film badge, TLD, or OSL dosimeter. The records shall be maintained until the Agency terminates the registration.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1131. Reserved**R12-1-1132. Supervision of a Radiographer's Assistant**

If a radiographer's assistant uses a radiation machine or conducts a radiation survey required by R12-1-1134(B), the registrant shall ensure that the assistant is under the personal supervision of a radiographer. For purposes of this Section "personal supervision" means:

1. The radiographer is physically present at the site where the radiation machine is being used;
2. The radiographer is available to give immediate assistance if required; and
3. The radiographer is able to observe directly the assistant's performance.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1133. Reserved**R12-1-1134. Radiation Surveys**

- A. A registrant shall conduct surveys with a calibrated and operable radiation survey instrument that meets the requirements of R12-1-1108.
- B. A registrant shall conduct a survey of a radiographic machine any time the machine is placed in storage to ensure that the machine will not expose personnel to radiation.
- C. A registrant shall maintain a record of each exposure survey conducted before a machine is placed in storage under subsection (B), if that survey is the last one performed during the workday. Each record shall be maintained for three years after it is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1135. Reserved**R12-1-1136. Permanent Radiographic Installations**

- A. If a registrant maintains a permanent radiographic installation that does not fall within the definition of "enclosed radiography" in R12-1-102, the registrant shall ensure that each entrance used for personnel access to the high radiation area has either:
 1. An entrance control device of the type described in R12-1-420(A)(1), which reduces the radiation level upon entry into the area, or
 2. Both conspicuous visible and audible alarm signals to warn of the presence of radiation. The registrant shall ensure that the visible signal is actuated by radiation if the x-ray tube is energized and the audible signal is actuated if a person attempts to enter the installation while the x-ray tube is energized.
- B. A registrant shall test the alarm system for proper operation with a radiation source each day before the installation is used for radiographic operations. The test shall include a check of both the visible and audible signals. The registrant shall test each device referenced in subsection (A)(1) monthly. If an entrance control device or alarm signal is operating improperly, the registrant shall immediately label the device or signal as "defective" and repair the device or signal within seven calendar days. The registrant may continue to use the facility during this seven-day period, if the registrant implements continuous surveillance requirements of R12-1-1116 and uses an alarm rate meter.
- C. A registrant shall maintain each record of alarm system and entrance control device tests for three years after the record is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1137. Reserved**R12-1-1138. Location of Documents and Records**

- A. A registrant shall maintain a copy of each record required by this Article and other applicable Articles of this Chapter at the location specified on the registration application.
- B. A registrant shall maintain a copy of the following at each field station and temporary job site:
 1. The registration that authorizes use of a radiation machines;
 2. A copy of Articles 4, 10, and 11 of this Chapter;
 3. Utilization logs for each radiation machine dispatched from that location, as required by R12-1-1112;
 4. Records of equipment problems identified in daily checks of equipment, as required by R12-1-1114;
 5. Records of alarm system and entrance control device checks, as required by R12-1-1136;
 6. Records of direct-reading dosimeters such as pocket dosimeters and electronic personnel dosimeters, as required by R12-1-1130;
 7. Operating and emergency procedures, as required by R12-1-1128;
 8. A report on the most recent calibration of the radiation survey instruments in use at the site, as required by R12-1-1108;
 9. A report on the most recent calibration of each alarm rate meter and operability check of each pocket dosimeter, or electronic personnel dosimeter, as required by R12-1-1130;
 10. Most recent survey record, as required by R12-1-1134; and
 11. If a registrant is operating in the state under R12-1-207, a copy of the out-of-state machine registration and a written authorization from the Agency to operate in the state.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1139. Reserved**R12-1-1140. Enclosed Radiography**

- A. The Agency has determined that any certified or certifiable cabinet x-ray system, as defined in Article 1, is exempt from the requirements of Article 11, provided that both of the following conditions are met:
 1. The registrant makes, or causes to be made, an evaluation of each certified and certifiable cabinet x-ray system, at intervals that do not exceed 12 months, to determine whether the system conforms to the standards for certified and certifiable cabinet x-ray systems defined in Article 1. Records of each evaluation shall be maintained for three years from the date the record is created; and
 2. The registrant performs a physical radiation survey with a survey instrument calibrated within the preceding 12 months and designed for the energy range and levels of radiation that will be assessed.
- B. A registrant with a cabinet x-ray system that is not exempt under subsection (A) shall comply with the recordkeeping requirements of this Article and the following special requirements. The registrant shall:
 1. Ensure that radiation levels measured at 5 centimeters (2 inches) from any accessible exterior surface of the enclosure do not exceed 50 microsievert (0.5 milliroentgen) in

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- one hour for any combination of technical factors (i.e., mA, kVp);
2. Ensure that access to the interior of the enclosure is possible only through interlocked doors or panels that prevent production of radiation unless all interlocked doors or panels are securely closed. The registrant shall ensure that opening a door or panel results in immediate termination of radiation production and subsequent reactivation of the x-ray tube is only possible at the control panel;
 3. Provide visible warning signals, activated only during production of radiation, at the control panel and at each access point to the interior of the enclosure;
 4. Before using an x-ray system make, or cause to be made, an initial evaluation of the x-ray system to determine compliance with this Article, and subsequently evaluate the x-ray system at intervals that do not exceed three months. The registrant shall maintain a record of each evaluation for two years, and
 5. Using instrumentation that complies with R12-1-1108, perform a physical radiation survey to satisfy the requirements of subsection (B)(4).
- C. A registrant with a shielded room x-ray systems shall comply with the recordkeeping requirements of this Article and the following special requirements. The registrant shall:
1. Shield each x-ray room so that every location on the exterior meets the requirements for an "unrestricted area" as specified in R12-1-416;
 2. Provide access to the interior of a shielded x-ray room only through doors or panels that are interlocked. The registrant shall ensure that radiation production is possible only when all interlocked doors and panels are securely closed, opening of any interlocked door or panel results in immediate termination of radiation production; and subsequent reactivation of the x-ray tube is only possible at the control panel;
 3. Provide each access point with two interlocks, each on a separate circuit, so that failure of one interlock will not affect the performance of the other interlock;
 4. Provide visible warning signals, activated only during production of radiation at the control panel and each access point to the shielded room;
 5. Make, or cause to be made, an initial evaluation of each shielded room x-ray system to determine compliance with this Article, and subsequently evaluate the x-ray system at intervals that do not exceed three months. The registrant shall maintain a record of each evaluation for two years;
 6. Perform radiation surveys to determine exposure with an instrument that meets the requirements of R12-1-1108;
 7. Inspect electrical interlocks and warning devices for correct operation before each use, and maintain a record of each inspection for two years;
 8. Not permit an individual to operate an x-ray machine for shielded room radiography unless the individual has received a copy of, and instruction in, the operating procedures and demonstrated competence in the safe use of the equipment;
 9. Ensure that an individual does not occupy the interior of any shielded room x-ray system during production of radiation;
 10. Provide personnel monitoring devices that meet the requirements of R12-1-1130 to each shielded room x-ray machine operator, and require that each operator use the devices;
 11. Maintain records of:
 - a. Quarterly inventories for mobile systems, as prescribed in R12-1-1110; and
 - b. Utilization logs for all systems, as prescribed in R12-1-1112; and
 12. Maintain records for three years from the date of the quarterly inventory or utilization log.
- D. A registrant shall connect an enclosed radiography machine to the electrical system in a manner that will prevent a ground fault from generating x-radiation.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

R12-1-1141. Reserved**R12-1-1142. Baggage and Package Inspection Systems**

- A. For x-ray systems designed to screen carry-on baggage or packages at airlines, railroads, bus terminals, package inspection facilities, or similar facilities, a registrant shall ensure the x-ray system has an operator present at the control area in a position that permits surveillance of the ports and doors during generation of x-radiation to prevent exposure to passengers and other members of the public.
- B. For an exposure or preset succession of exposures of one-half second or greater duration, a registrant shall use a system that enables the operator to terminate the exposure or preset succession of exposures at any time.
- C. For an exposure or preset succession of exposures of less than one-half second duration, a registrant shall use a system that allows the operator to complete the exposure in progress, but prevent additional exposures.
- D. A registrant shall operate a baggage or package inspection system according to the manufacturer's instructions.
- E. A registrant shall not disconnect or otherwise tamper with the safety systems of a baggage or package inspection system, except for maintenance purposes.
- F. In addition to the requirements in this Section, a registrant using a baggage or package inspection system shall meet the requirements in R12-1-1140(A), (B), and (D).

Historical Note

New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1143. Reserved**R12-1-1144. Reserved****R12-1-1145. Reserved****R12-1-1146. Training**

- A. A registrant shall not allow an individual to act as a radiographer until the individual has received training in the subjects in subsection (G), has participated in a minimum of two months of on-the-job training, and is certified through a radiographer certification program by a independent certifying organization in accordance with the criteria specified in Appendix A.
1. A registrant shall provide the Agency with proof of an individual's certification upon request.
 2. A registrant shall maintain proof of an individual's certification at the job site where the individual is performing field radiography.
 3. A registrant that employs a certified radiographer in Arizona shall ensure that:
 - a. The radiographer has obtained initial certification or recertification within the last five years; and
 - b. An uncertified radiographer works only as a radiographer's assistant until certified.
 4. A radiographer shall recertify every five years by:

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- a. Taking an approved radiography certification examination in accordance with this subsection; or
 - b. Providing written evidence that the radiographer is active in the practice of industrial radiography and has participated in continuing education during the previous five-year period.
5. If an individual cannot provide the written evidence required in subsection (4)(b), the individual shall retake the certification examination.
 6. A radiographer shall provide the registrant with proof of certification in the form of a card issued by the certifying organization that contains:
 - a. A picture of the certified radiographer,
 - b. The radiographer's certification number,
 - c. The date the certification expires, and
 - d. The radiographer's signature.
- B.** A registrant shall not allow an individual to act as a radiographer until the individual:
1. Receives copies of and instruction in the requirements of this Article, applicable Sections of Articles 4 and 10 and R12-1-107, the Agency registration or registrations under which the individual will perform industrial radiography, and the registrant's operating and emergency procedures;
 2. Demonstrates an understanding of the registrant's registration and operating and emergency procedures by successful completion of a written or oral examination that covers the relevant material;
 3. Receives training in:
 - a. Use of the registrant's radiation machine,
 - b. Daily inspection of the radiation machine, and
 - c. Use of radiation survey instruments; and
 4. Demonstrates an understanding of the use of the radiation machines and survey instruments described in subsection (B)(3) by successful completion of a practical examination covering this material.
- C.** A registrant shall not allow an individual to act as a radiographer's assistant until the individual:
1. Receives copies of and instruction in the requirements of this Article, applicable Sections of Articles 4 and 10 and R12-1-107, the Agency registration or registrations under which the radiographer will perform industrial radiography, and the registrant's operating and emergency procedures;
 2. Develops competence to use, under the personal supervision of the radiographer, the registrant's radiation machine and radiation survey instruments; and
 3. Demonstrates understanding of the instructions provided under subsection (C)(1) by successfully completing a written test on the subjects covered and demonstrates competence using the hardware described in subsection (C)(2) by successfully completing a practical examination.
- D.** A registrant shall provide refresher safety training for each radiographer and radiographer's assistant at intervals that do not exceed 12 months.
- E.** Except where an individual serves both as a radiographer and an RSO, the RSO or the RSO's designee shall design and implement an inspection program to examine the job performance of each radiographer and radiographer's assistant and ensure that the Agency's rules and registration requirements, and the registrant's operating and emergency procedures, are followed. The inspection program shall:
1. Include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation, at intervals that do not exceed six months; and
 2. Provide that, if a radiographer or a radiographer's assistant has not participated in an industrial radiographic operation for more than six months since the last inspection, each radiographer shall demonstrate knowledge of the training requirements in subsection (B)(3) and each radiographer's assistant shall demonstrate knowledge of the training requirements of subsection (C)(2) by a practical examination before these workers can participate in a radiographic operation.
- F.** A registrant shall maintain records of the training required in this Section, including certification documents, written and practical examinations, refresher safety training documents, and inspection documents, in accordance with subsection (I).
- G.** A registrant shall include the following subjects in the training required under subsection (A):
1. Fundamentals of radiation safety, including:
 - a. Characteristics of x-ray radiation;
 - b. Units of radiation dose and quantity of radioactivity;
 - c. Hazards of exposure to radiation;
 - d. Levels of radiation from x-ray machines; and
 - e. Methods of controlling radiation dose (time, distance, and shielding);
 2. Radiation detection instruments, including:
 - a. Use, operation, calibration, and limitations of radiation survey instruments;
 - b. Survey techniques; and
 - c. Use of personnel monitoring equipment;
 3. Equipment topics, including:
 - a. Operation and control of radiation machines; and
 - b. Inspection and maintenance of each radiation machine and survey instrument;
 4. The requirements of pertinent Agency rules; and
 5. Case histories of accidents in radiography.
- H.** A registrant shall maintain records of radiographer certification in accordance with subsection (I)(1) and provide proof of certification as required in subsection (A)(1).
- I.** A registrant shall maintain the following records for three years after each record is made:
1. Records of training for each radiographer and each radiographer's assistant. For radiographers, the records shall include radiographer certification documents and verification of certification status. All records shall include copies of written tests, dates of oral and practical examinations, and names of individuals who conducted and took the oral and practical examinations; and
 2. Records of annual refresher safety training and semi-annual inspections of job performance for each radiographer and each radiographer's assistant. The records for the annual refresher safety training shall list topics discussed during training, the date of training, and names of each instructor and attendee. For inspections of job performance, the records shall include a list of items checked during the inspection and any non-compliance observed by the RSO.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

Appendix A. Standards for Organizations that Provide Radiography Certification

Note: For purposes of this Article an "independent certifying organization" means an organization that meets all of the criteria in this Appendix.

I. Requirements for an Organization that Provides Radiographer Certification

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To qualify to provide radiography certification, an organization shall:

- A. Be a society or association, with members who participate in, or have an interest in, the field of industrial radiography;
- B. Not restrict membership because of race, color, religion, sex, age, national origin, or disability;
- C. Have a certification program that is open to nonmembers, as well as members;
- D. Be an incorporated, nationally recognized organization that is involved in setting national standards of practice within its fields of expertise;
- E. Have a staff comparable to other nationally recognized organizations, a viable system for financing its operations, and a policy-and decision-making review board;
- F. Have a set of written, organizational by-laws and policies that address conflicts of interest and provide a system for monitoring and enforcing the by-laws and policies;
- G. Have a committee, with members who can carry out their responsibilities impartially, review and approve the certification guidelines and procedures, and advise the organization's staff in implementing the certification program;
- H. Have a committee, with members who can carry out their responsibilities impartially, review complaints against certified individuals, and determine sanctions;
- I. Have written procedures that describe all aspects of the organization's certification program;
- J. Maintain records of the current status of each individual's certification and administration of the certification program;
- K. Have procedures to ensure that certified individuals are provided due process with respect to administration of the certification program, including a process for becoming certified and a process for imposing sanctions against certified individuals;
- L. Have procedures for proctoring examinations and qualifying proctors. The organization, through these procedures, shall ensure that an individual who proctors an examination is not employed by the same company or corporation (or a wholly-owned subsidiary of the company or corporation) that employs an examinee;
- M. Exchange information about certified individuals with the Agency, other independent certifying organizations, the NRC, or Agreement States and allow periodic review of its certification program and related records; and
- N. Provide a description to the Agency of its procedures for choosing examination sites and providing a favorable examination environment.

II. Requirements for a Certification Program

An independent certifying organization shall ensure that its certification program:

- A. Requires an applicant for certification to:
 - 1. Obtain training in the subjects listed in R12-1-1146(G), and
 - 2. Satisfactorily complete a written examination that covers these subjects;
- B. Require an applicant for certification to provide documentation demonstrating that the applicant has:
 - 1. Received training in the subjects listed in R12-1-1146(G);
 - 2. Satisfactorily completed the on-the-job training required in R12-1-1146(A); and
 - 3. Received verification from a registrant that the applicant has demonstrated the capability of independently working as a radiographer;
- C. Provides procedures that protect examination questions from disclosure;

- D. Provides procedures for denying certification to an applicant and revoking, suspending, and reinstating a certificate;
- E. Provides a certification period that is not less than three years or more than five years, procedures for renewing certifications and, if the procedures allow renewals without examination, a system for assessing evidence of recent full-time employment and annual refresher training; and
- F. Provides a timely response to inquiries, by telephone or letter, from members of the public, about an individual's certification status.

III. Requirements for a Written Examination

An independent certifying organization shall ensure that its examination:

- A. Is designed to test an individual's knowledge and understanding of the subjects listed in R12-1-1146(G) or equivalent NRC or Agreement State requirements;
- B. Is written in a multiple-choice format; and
- C. Has psychometrically valid questions drawn from a question bank and based on the material in R12-1-1146(G).

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 12. ADMINISTRATIVE PROVISIONS

R12-1-1201. Timeliness

- A. Any application, request, response, or report required by any rule, order, application, or letter shall be considered timely if it is postmarked on or before the due date, or hand-delivered to the Agency office before 5:00 p.m. on the due date. If the due date falls on a Saturday, a Sunday, or a legal holiday, the due date is extended to the end of the next day that is not a Saturday, a Sunday, or legal holiday.
- B. As used in this Article, "working days" are all days other than Saturdays, Sundays, or legal holidays prescribed in A.R.S. § 1-301.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1202. Administrative Hearings

- A. All hearings shall be governed by Title 41, Chapter 6, Article 10.
- B. If the Radiation Regulatory Hearing Board is conducting a hearing, all motions and rulings shall be in writing, except those made during the hearing may be oral. The Board shall ensure that any agreements reached during a conference are incorporated in the record, and that all hearings are recorded.
- C. If it is necessary for an administrative law judge or the Board to visit the site of an alleged violation or activity that is regulated by the Agency in order to supplement testimonial or documentary evidence presented at the hearing, the party that proposed the visit shall enter the purpose of the visit and all pertinent observations into the record.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1203. Procedures for Rulemaking Public Hearings

- A. Hearings on proposed rulemaking by the Agency shall be held before the Director or another person designated by the Director to act as the hearing officer.

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- B. All hearings shall be governed by the Administrative Procedure Act, A.R.S. §§ 41-1021, 41-1021.01 through 41-1025, 41-1028, 41-1029, and 41-1031.
- C. The hearing shall be recorded and shall be retained as part of the record of the rulemaking.
- D. A written summary of the comments presented shall be prepared along with a written response to the comments by the Agency staff and retained with the record of the rulemaking.
- E. The request for hearing shall identify the rule involved or propose a new rule.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1).

R12-1-1204. Initiation of Administrative Hearings

- A. An administrative hearing shall be initiated by the Director or commenced in response to the request of any person directly affected by an order of the Director or a proposed licensing or registration action by the Agency.
- B. If the Director initiates an administrative hearing pursuant to R12-1-1220, the order may incorporate a notice of hearing; otherwise a notice of any hearing and the notice of violation shall be issued separately.
- C. For any hearing on a proposed licensing or registration action, only a notice of hearing shall be issued.
- D. A notice of hearing shall specify the time, place, and nature of the hearing and may include specification of the legal authority and jurisdiction under which the hearing is to be held; the particular sections of the statutes, rules, or license conditions involved; the amount of the penalty and other sanctions proposed, if appropriate; and a statement of matters asserted and issues involved.
- E. A hearing may be requested by filing a written request for hearing with the Director within the time limit specified in the pertinent order or notice. A request for hearing on a regulatory action not subject to public notice requirements may be filed at any time, provided that a request to reconsider a licensing or registration action shall be filed within 30 days of the issuance of the licensing or registration action.
 1. The request for a hearing to appeal an order shall identify the order which the person desires to appeal and include a statement reciting the matters asserted, issues involved, and the applicable statutes or rules. The Agency shall respond within 30 calendar days to the person and forward the request and response to the Chairperson of the Board.
 2. The request for a hearing to appeal a licensing or registration action shall identify the action appealed. The Agency shall respond within 30 calendar days to the person and forward the request and response to the Chairperson of the Board.
 3. The request for hearing shall include a statement identifying the interest claimed to be affected by the action. If a statement is not provided or is clearly insufficient, the Chairperson may deny the request and notify the person of that action.
 4. If the request for hearing is denied for insufficiency, the requestor shall have five days from the notice of denial within which to file an amended request for hearing. The amended request shall refer back to the original request for hearing.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).

R12-1-1205. Intervention in Administrative Hearings; Director as a Party

- A. Any person may submit a timely motion to intervene in a proceeding if an unconditional right to intervene is granted by law or the applicant claims an interest to any property or transaction affected by the proceeding.
- B. A motion to intervene shall be in writing and shall state the reason why the applicant should be allowed to intervene. If the applicant claims an interest in property or in a transaction affected by the proceeding, the applicant shall demonstrate that the result of the proceeding may as a practical matter impair or impede protection of that interest.
- C. The applicant shall serve the motion upon the administrative law judge or the Board, as appropriate, and the Director as a party at least five working days before the hearing. An application for leave to intervene shall not be granted, if by doing so, the issues will be unduly broadened.
- D. If two or more persons have substantially similar positions, the administrative law judge may declare them a class of interested persons for purposes of the hearing. The members of a class shall designate one person to be spokesperson for the class. More than one class may be established for a hearing.
- E. The Director is party to all administrative hearings.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1206. Repealed**Historical Note**

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1207. Rehearing or Review

- A. The Board may grant a rehearing or review of a decision for any of the following reasons, materially affecting a party's rights:
 1. Irregularity in the administrative proceedings or any order or abuse of discretion, that deprived a party of a fair hearing;
 2. Misconduct of the Board, an administrative law judge, or the prevailing party;
 3. Accident or surprise that could not have been prevented by ordinary prudence;
 4. Newly discovered material evidence that could not, with reasonable diligence have been discovered and produced at the original hearing;
 5. Excessive or insufficient penalties;
 6. Error in the admission or rejection of evidence or other errors of law occurring at the administrative hearing or during the progress of the proceedings;
 7. That the decision is not justified by the evidence or is contrary to law.
- B. The Board may affirm or modify a decision or grant a rehearing to all or any of the parties and on all or part of the issues for any of the reasons listed in subsection (A). An order modifying a decision or granting a rehearing shall specify with particularity the ground or grounds for the order. A rehearing shall cover only the subject matters specified in the order.
- C. No later than 15 working days after the date on the decision the Board may, on its own initiative, order a rehearing or review of its decision for any reason for which it might have granted a rehearing on motion of a party. After giving the parties notice and an opportunity to be heard on the matter, the

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Board may grant a motion for rehearing or review for a reason not stated in the motion.

- D.** If a motion for rehearing or review is based upon affidavits, they shall be served with the motion. An opposing party may, within 30 calendar days after service, serve opposing affidavits. This period of time may be extended by the Board if good cause is shown or a written stipulation is received from both parties. The Board may permit reply affidavits.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1208. Repealed

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1209. Notice of Violation

- A.** Except as provided in R12-1-1220, the Agency shall issue a notice of violation and provide time, as specified in R12-1-1210, for the registrant or licensee to respond before the Director issues any order to modify, suspend, or revoke a license or registration, or to impose a civil penalty.
- B.** The notice shall specify:
1. The severity level and circumstances of the alleged violation;
 2. The particular statute, rule, or registration or license condition violated; and
 3. The division of the registration or license.
- C.** The notice shall specify a civil penalty if one is proposed by the Agency.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1210. Response to Notice of Violation

- A.** Except as provided in subsection (D), within 30 calendar days of the date of the notice, or longer time period specified in the notice, the person charged with the violation shall submit a written response that includes a description of:
1. The actions taken to achieve compliance and the results of the actions;
 2. The actions that are proposed and the date when full compliance is expected to be achieved; and
 3. If the violation is a repeat violation, why corrective actions taken previously did not prevent the violation from recurring and why the new actions will be effective.
- B.** If the person charged with a violation submits a timely response, the Director, in consideration of the answer and the severity level of the violation, shall do one of the following:
1. Issue an initial order conditionally imposing the full amount of the proposed civil penalty and any other sanctions proposed;
 2. Issue an initial order conditionally mitigating or waiving the proposed civil penalty under R12-1-1214(B);
 3. Waive the penalty as authorized under R12-1-1216(C);
 4. Enter into a consent agreement as authorized under R12-1-1222.
- C.** If the Agency does not receive an adequate and timely response to the notice, the Director shall issue an initial order

conditionally imposing any or all sanctions and civil penalties proposed in the notice of violation. If no civil penalty was proposed, the initial order may impose the base civil penalty listed in R12-1-1216.

- D.** Response to the notice of violation as otherwise required in this Section may be waived by the Agency, if the Agency determines that a response is not required.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1211. Initial Orders

- A.** Initial orders are valid for 30 calendar days after the date of the order, or until the other time specified in the order, during which time the person charged may:
1. Pay the civil penalty proposed and accept any proposed sanction, or
 2. Request a hearing before the Board.
- B.** If a timely request for a hearing is not received, the order shall become final.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1212. Request for Hearing in Response to an Initial Order

- A.** In a request for a hearing, a person charged with a violation shall include a statement of the issues and the explanations and the arguments supporting denial of the violation or demonstrating extenuating circumstances, errors in notice, or any other reasons for not imposing the civil penalty, sanction, or both.
- B.** The statement shall identify all issues. The failure to include an issue may, at the option of the Board, foreclose consideration of that issue. If a statement is not provided or is insufficient, the Board may summarily determine the issues.
- C.** The person charged may admit the violation and request a reduction of the proposed civil penalty based on extenuating circumstances.
- D.** The person charged may waive oral proceedings and request dismissal of any or all of the charged violations, reduction of the civil penalties, or modification of any other imposed sanction based on consideration by the Board of the written statement.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1213. Severity Levels of Violations

- A.** The following violations are classified as severity level I violations:
1. Any failure, malfunction, or insufficiency of a safety system which may result in
 - a. Radiation exposure to a person,
 - b. A concentration of radionuclides; or
 - c. A radiation level, in excess of 10 times the limits specified in 12 A.A.C.1, or 10 times the prescribed therapeutic patient dose.
 2. Any inaccurate or incomplete information that is intentionally provided by a licensee or registrant official, and if the information had been complete and accurate at the

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- time it was provided, would have likely resulted in action such as an immediate order required to protect the public health and safety.
3. Any information that the Agency requires be kept by a licensee or registrant that is incomplete or inaccurate because of falsification by or with the knowledge of a licensee or registrant official, and if the information had been complete and accurate at the time it was reviewed by the Agency, would have likely resulted in action such as an immediate order required to protect the public health and safety.
 4. Any concealment or attempted concealment of a severity level I violation of the Act, 12 A.A.C. 1, or a license condition. This is a separate violation in addition to the original violation.
 5. Any concealment or attempted concealment of a severity level II violation of the Act, 12 A.A.C. 1, or a license condition. This violation shall increase the severity level of the original violation by one level.
 6. For the purposes of subsections (A)(2) and (3) above the term "licensee or registrant official" means the owner, a partner, a corporate officer, a radiation safety officer, the individual signing an application for a license or registration, or the chairman of any radiation safety committee supervising the radiation safety program of the licensee or registrant.
- B.** The following violations are classified as severity level II violations:
1. Any failure, malfunction, or insufficiency of a safety system which may result in:
 - a. Radiation exposure to a person,
 - b. A concentration of radionuclides, or
 - c. A radiation level, in excess of two times the limits specified in 12 A.A.C. 1, or two times the prescribed therapeutic patient dose.
 2. Any attempt to prevent an Agency inspection.
 3. Any concealment or attempted concealment of a severity level III violation of the Act, 12 A.A.C. 1, or a license condition by a licensee or registrant official as defined in subsection (A)(6). This violation shall increase the severity level of the original violation by one level.
 4. Significant information provided and designated by a licensee or registrant and not previously provided to the Agency because of careless disregard on the part of a licensee official or registrant.
- C.** The following violations are classified as severity level III violations:
1. Any failure, malfunction, or insufficiency of a safety system, or loss of control over a radiation source, which may result in:
 - a. Radiation exposure to a person,
 - b. A concentration of radionuclides, or
 - c. A radiation level in excess of the limits specified in 12 A.A.C. 1, or 20% higher than the prescribed therapeutic patient dose.
 2. Any concealment or attempted concealment of a severity level IV or V violation of the Act, 12 A.A.C. 1, or a registration or license condition. This violation shall increase the severity level of the original violation by one level.
 3. Any violation of the safety requirements for the use, storage, disposal, or the preparation for transportation of sources of radiation, as prescribed in the Act, 12 A.A.C. 1, or in a license or registration condition, provided the violation does not meet the criteria for a severity level I or II violation and the licensee or registrant does not maintain a radiation protection program meeting the requirements of R12-1-407.
 4. Any factually incorrect statement upon which the Agency relied or would have relied in consideration of any action.
 5. Any unlawful attempt to interfere with the progress of an inspection by the Agency.
 6. The acquisition of any source of radiation without the applicable current registration or license, unless otherwise authorized by these rules; or use of the source outside the scope of the current registration or license.
 7. The continued use of sources of radiation after April 1, if the annual fee has not been paid for the current year.
- D.** The following violations are classified as severity level IV violations:
1. Any violation of R12-1-407;
 2. Any violation of the safety requirements for the use, storage, disposal, or preparation for transportation of sources of radiation, prescribed in the Act, 12 A.A.C. 1, or in a license or registration condition, provided the violation does not meet the criteria for a severity level I, II or III violation;
 3. Failure to maintain records of mammography quality control tests required in R12-1-614.
 4. Any failure to comply with the reporting requirements in the Act or 12 A.A.C. 1.
- E.** The following violations are classified as severity level V violations:
1. Failure of a registrant or a licensee to comply with the recordkeeping requirements of:
 - a. The Act;
 - b. 12 A.A.C. 1; or
 - c. A registration or facility certification, or license condition, provided that all safety requirements prescribed in the Act, 12 A.A.C. 1, or in a license or registration condition are met or otherwise demonstrated.
 2. If compliance with all safety requirements cannot be demonstrated by the registrant or licensee the failure to comply with the recordkeeping requirements is classified as a level IV violation.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
 Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1214. Mitigating Factors

- A.** The Agency may refrain from issuing a Notice of Violation for Severity Level IV or V violations identified by the registrant or licensee provided the severity level IV or V violations are identified in an inspection report, the report includes a brief description of the corrective action, and the violation meets all of the following criteria:
1. It was identified by the licensee, as a result of an event discovered by the licensee or registrant;
 2. It was not a violation that could reasonably be expected to have been prevented by the licensee's or registrant's corrective action for a previous violation or a previous licensee or registrant finding;
 3. It was or will be corrected within a reasonable time, by specific corrective action committed to by the registrant or licensee by the end of the inspection. The corrective action shall include comprehensive measures that will prevent reoccurrence;
 4. It was not a willful violation or, if it was willful:

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- a. The violation was reported to the Agency;
 - b. The violation appears to be the isolated action of an employee without management involvement and the violation was not caused by lack of management oversight;
 - c. Significant remedial action was taken by the licensee or registrant, demonstrating the seriousness of the violation to all affected personnel.
- B. The Director may:**
1. Reduce the scheduled civil penalty, including any augmentation, by 50% for the discovery, remedy, and voluntary reporting of a severity level I or II violation by the registrant or licensee; or
 2. Waive the scheduled civil penalty, including augmented civil penalties, for the discovery, remedy, and voluntary reporting of a severity level III, IV, or V violation by the registrant or licensee. For the purposes of this rule, "voluntary reporting" means that the registrant or licensee has notified the Agency of a violation, the reporting of which may or may not be required under 12 A.A.C. 1.
- Historical Note**
Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).
- R12-1-1215. License and Registration Divisions**
- A.** Each registrant or license type is classified into one of three administrative sanction divisions.
1. Division I licenses and registrations:
 - a. Broad Academic Class A,
 - b. Broad Academic Class B,
 - c. Broad Academic Class C,
 - d. Broad Industrial Class A,
 - e. Broad Medical,
 - f. Class C Laser Facility,
 - g. Distribution,
 - h. Fixed Gauge Class A,
 - i. Industrial Radiography Class A,
 - j. Low Level Radioactive Waste Disposal Site,
 - k. Major Accelerator Facility,
 - l. Medical Materials Class A,
 - m. Medical Teletherapy,
 - n. NORM Commercial Disposal Site,
 - o. Nuclear Laundry,
 - p. Nuclear Pharmacy,
 - q. Open Field Irradiator,
 - r. Secondary Uranium Recovery,
 - s. Waste Processor Class A,
 - t. Well Logging,
 - u. X-Ray Machine Class A.
 2. Division II licenses and registrations:
 - a. Broad Industrial Class B,
 - b. Broad Industrial Class C,
 - c. Class B Industrial Radiofrequency Facility,
 - d. Class B Laser Facility,
 - e. Class C Industrial Radiofrequency Facility,
 - f. Fixed Gauge Class B,
 - g. Health Physics Class A,
 - h. Industrial Radiation Machine,
 - i. Industrial Radiography Class B,
 - j. Laser Light Show,
 - k. Limited Academic,
 - l. Medical Imaging Facility,
 - m. Medical Laser,
 - n. Medical Materials Class B,
 - o. Medical Radiofrequency Device Facility,
 3. Division III licenses and registrations:
 - a. Class A Industrial Radiofrequency Facility,
 - b. Class A Laser Facility,
 - c. Gas Chromatograph,
 - d. General Depleted Uranium,
 - e. General Industrial,
 - f. General Medical,
 - g. General Veterinary Medicine,
 - h. Health Physics Class B,
 - i. Laboratory,
 - j. Leak Detector,
 - k. Limited Industrial,
 - l. Medical Materials Class C,
 - m. Other Ionizing Radiation Machine,
 - n. Other Nonionizing Radiation Machine,
 - o. Portable Gauge,
 - p. Possession Only,
 - q. Radioactive waste transfer-for-disposal,
 - r. Unclassified,
 - s. Veterinary Medicine,
 - t. X-ray Machine Class C.
 - u. Class A Medical (non-cosmetic) Radiofrequency Facility,
 - v. Class B Medical (non-cosmetic) Radiofrequency Facility,
 - w. Class C Medical (non-cosmetic) Radiofrequency Facility,
 - x. Class D Medical (non-cosmetic) Radiofrequency Facility.
- B.** Any person required by the Act to register the use of a general license with the Agency, or to obtain a specific license from the Agency, is considered a licensee of the appropriate type notwithstanding the failure of the person to register or obtain a license.
- C.** The Agency shall classify each person that possesses an out-of-state specific license for the use of radioactive material and operates in Arizona under reciprocal recognition, as prescribed in R12-1-320 and authorized in R12-1-1302(D)(16), by placing the person into the administrative sanction division listed in subsection (A) that best defines the out-of-state, licensed activities.
- D.** For administrative purposes, the following persons are classified with the Division III licensees and registrants in subsection (A)(3):
1. Any person not required to register the use of a general license,
 2. Any person not required to obtain a specific license,
 3. Any person not required to register a source of radiation who violates the Act or 12 A.A.C. 1, and
 4. Any person registered to provide x-ray machine service.
- Historical Note**
Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 21 A.A.R. 289, effective April 6, 2015 (Supp. 15-1).

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R12-1-1216. Civil Penalties

- A.** Except as augmented by R12-1-1217, the schedule of civil penalties is as follows:
1. Severity level I violations:
 - a. Division I registration or license -- \$4,000;
 - b. Division II registration or license -- \$3,000;
 - c. Division III registration or license -- \$2,000.
 2. Severity level II violations:
 - a. Division I registration or license -- \$3,000;
 - b. Division II registration or license -- \$2,000;
 - c. Division III registration or license -- \$1,000.
 3. Severity level III violations:
 - a. Division I registration or license -- \$2,000;
 - b. Division II registration or license -- \$1,000;
 - c. Division III registration or license -- \$500.
 4. Severity level IV violations:
 - a. Division I registration or license -- \$1,000;
 - b. Division II registration or license -- \$500;
 - c. Division III registration or license -- \$250.
 5. Severity level V violations:
 - a. Division I registration or license -- \$500,
 - b. Division II registration or license -- \$250,
 - c. Division III registration or license -- \$125.
- B.** Payment of civil penalties for severity level I and severity level II violations may not be avoided merely by rectifying the condition; however, the Board may mitigate or waive the penalty upon determining a violation meets all of the following:
1. It was not a violation that could reasonably be expected to have been prevented by the licensee's or registrant's corrective action for a previous violation or a previous licensee or registrant finding;
 2. It was or will be corrected within the time given for corrections, by specific corrective action committed to by the licensee or registrant by the end of the inspection, which includes immediate and comprehensive measures to prevent recurrence;
 3. It was not a willful violation.
- C.** The Director or Board shall waive payment of penalties for severity level III through severity level V violations provided:
1. The violation is not subject to augmentation under R12-1-1217; and
 2. The registrant or licensee submits a timely and adequate response to the notice; rectifies the conditions which appear to have caused the violation; and complies with the Act, 12 A.A.C. 1, registration, and license conditions.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1217. Augmentation of Civil Penalties

- A.** A continuing violation, for the purposes of calculating the proposed civil penalty, is considered a separate violation for each day it continues. The second (or successive) day of a continuing violation is not considered a repeat violation of the violation occurring on the first day.
- B.** If a second severity level I violation is committed within five years, the Agency shall increase the base civil penalty by 100%, provided the registration or license is not revoked under R12-1-1219.
- C.** If a second severity level II violation is committed within a period of five years, the Agency shall increase the base civil penalty by 50%, provided the registration or license is not revoked under R12-1-1219.

- D.** If a severity level III violation is repeated within five years, the Agency shall increase the base civil penalty by 50%. If the same severity level III violation is repeated a second time within five years, the base civil penalty shall be increased by 100%, provided the registration or license is not revoked under R12-1-1219.
- E.** If a severity level IV violation is repeated within five years, the Agency shall propose the base d civil penalty.
1. If the same violation occurs three times within five years, the Agency shall increase the base civil penalty by 50%.
 2. If the same violation occurs four times within five years, the Agency shall increase the base civil penalty by 100%, provided the registration or license is not revoked under R12-1-1219.
- F.** If more than three severity level V violations are observed during two consecutive inspections, the Agency shall impose a civil penalty for each violation. The base civil penalty for each violation is the base civil penalty assessed for a severity level V violation. If the inspection shows repetition of a violation the base civil penalty for each repeat violation is the base civil penalty assessed for a severity level IV violation. Subsection (E) does not apply to penalties under this subsection.
- G.** Other rights and procedures are not affected by the repeat nature of a violation.
- H.** A person may avoid the penalties in subsections (D) and (E) by demonstrating to the Director in the response to the penalty that the violation meets all of the following criteria:
1. It was not a violation that could reasonably be expected to have been prevented by the licensee's or registrant's corrective action for a previous violation or a previous licensee or registrant finding;
 2. It was or will be corrected within the time given for correction, by specific corrective action committed to by the licensee or registrant by the end of the inspection, which includes immediate and comprehensive measures to prevent recurrence;
 3. It was not a willful violation.
- I.** Notwithstanding any other provision of this Section, the Agency shall not impose a penalty that exceeds a maximum of \$5,000 for each violation for each day up to a maximum of \$25,000 for any 30-day period.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1218. Payment of Civil Penalties

- A.** A person shall pay civil penalties imposed under this Article by certified check or money order payable to the Agency and mailed or delivered to the Agency at the address shown on the notice of violation.
- B.** Payment of a civil penalty is due 30 calendar days after the effective date of the final order imposing the civil penalties, unless an alternate payment schedule is agreed upon before that date. A payment schedule shall not extend beyond one year after the due date.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1219. Additional Sanctions-Show Cause

- A.** If a severity level I violation is repeated or if any second severity level I violation is committed within 10 years, the Agency

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shall require the registrant or licensee to show cause why the registration or license should not be suspended or revoked.

- B. If any second severity level II violation is committed within five years, or if a severity level II violation involving radioactive effluent releases, excessive radiation levels, or radiation overexposure to an individual is committed within five years of a similar severity level I violation, the Agency shall require the registrant or licensee to show cause why the registration or license should not be suspended or revoked.
- C. If repeated or different severity level III violations are committed on three separate occasions within any five year period, the Agency may require the registrant or licensee to show cause why the registration or license should not be suspended or revoked.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1220. Escalated Enforcement

- A. The Director may issue an order to suspend, revoke, or modify a registration or license, or impound a radiation source for:
 - 1. Any severity level I violation; or
 - 2. Any of the following occurring within a five-year period:
 - a. A repeat severity level II violation,
 - b. A different second severity level II violation, or
 - c. A severity level II violation after a severity level I violation.
- B. The Director may issue an order impounding the radiation source or suspending, revoking, or modifying the registration or license upon determining that conditions exist which cause a potential for a severity level I or severity level II violation.
- C. The Agency shall hold hearings according to A.R.S. § 30-688.
- D. An order to impound a radiation source, or an order to suspend, revoke, or modify a registration or a license shall remain in effect until the order is suspended or modified by the Board according to A.R.S. § 30-688.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1221. Reserved

R12-1-1222. Enforcement Conferences

- A. An enforcement conference consists of a meeting in person between management personnel of the registrant or licensee and the Agency.
- B. The enforcement conference is informal; however, the Agency shall make a record of items discussed and decisions reached. Statements made at the conference shall not be introduced in evidence at a formal hearing unless all parties have consented.
- C. Based on the results of the conference, the Agency may:
 - 1. Dismiss the notice of violation;
 - 2. Enter into a consent agreement; or
 - 3. Continue with, or initiate, formal proceedings.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1223. Registration and Licensing Time-frames

The Agency shall perform an administrative completeness review and substantive review of an application for a new or renewal license or registration; or an amendment to a license or registration within the time-frames in Table A. The Agency shall review an application for an amendment to an existing license or registration that changes the license category listed in R12-1-1306, using the time-frames specified for the requested category.

Historical Note

Adopted effective December 9, 1998 (Supp. 98-4). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

Table A. Registration and Licensing Time-frames

REGISTRATION AND LICENSING TIME-FRAMES

License or Registration category in R12-1-1306	Administrative Completeness Review Time-frame, in days	Substantive Review Time-frame, in days	Overall Time-frame, in days
A1	90	30	120
A2	90	30	120
A3	90	30	120
A4	60	30	90
B1	90	30	120
B2	90	30	120
B3	90	30	120
B4	90	30	120
B5	90	30	120
B6	40	20	60
C1	60	30	90
C2	60	30	90
C3	60	30	90
C4	60	30	90
C5	60	30	90
C6	60	30	90

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C7	60	30	90
C8	90	30	120
C9	60	30	90
C10	40	20	60
C11	90	30	120
C12	90	30	120
C13	90	30	120
C14	90	30	120
C15	90	30	120
C16	90	30	120
C17	90	30	120
D1	90	30	120
D2	90	30	120
D3	90	30	120
D4	40	20	60
D5	40	20	60
D6	90	30	120
D7	40	20	60
D8	60	30	90
D9	90	30	120
D10	90	30	120
D11	1095	365	1460
D12	730	180	910
D13	365	90	455
D14	90	30	120
D15	40	20	60
D16	20	10	30
D17	40	20	60
D18	90	30	120
D19	365	120	485
E1	40	20	60
E2	40	20	60
E3	40	20	60
E4	40	20	60
E5	90	30	120
E6	90	30	120
F1	40	20	60
F2	40	20	60
F3	40	20	60
F4	40	20	60
F5	20	10	30
F6	40	20	60
F7	40	20	60
F8	40	20	60
F9	40	20	60
F10	40	20	60
F11	40	20	60
F12	40	20	60
F13	40	20	60
F14	40	20	60
F15	40	20	60
F16	90	30	120

Footnote: “administrative completeness review time-frame”; “substantive review time-frame,” and “overall time-frame” are defined in A.R.S. § 41-1072.

Historical Note

Adopted effective December 9, 1998 (Supp. 98-4).
Amended by final rulemaking at 9 A.A.R. 4302, effective
November 14, 2003 (Supp. 03-3). Amended by final
rulemaking at 21 A.A.R. 289, effective April 6, 2015
(Supp. 15-1).

ARTICLE 13. LICENSE AND REGISTRATION FEES

R12-1-1301. Definition

“Combined” means the Agency has granted authorized activities contained in two or more license types in a single license document, requiring the payment of a single license fee for the more expensive license of the planned combination.

Historical Note

Adopted effective November 19, 1982 (Supp. 82-6).
Amended effective November 28, 1983 (Supp. 83-6).
Amended subsection (B) and added a new subsection (C)
effective November 28, 1986 (Supp. 86-6). Section
repealed, new Section adopted effective November 5,
1993 (Supp. 93-4). Amended by final rulemaking at 5
A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1302. License and Registration Categories

A. Category A licenses are those specific licenses which authorize a school, college, university, or other teaching facility to possess and use radioactive materials for instructional or research purposes.

1. A broad academic class A license is any category A license which meets the specifications of R12-1-310(A)(1).
2. A broad academic class B license is any category A license other than a broad academic class A license which meets the specifications of R12-1-310(A)(2).
3. A broad academic class C license is any category A license other than a broad academic class A or B license which meets the specifications of R12-1-310(A)(3).
4. A limited academic license is any category A license which authorizes only those radioisotopes, forms, and quantities individually specified in the license.

B. Category B licenses are those specific or general licenses which authorize the application of radioactive material or the radiation from it to a human being for medical diagnostic, therapeutic, or research purposes, or the use of radioactive material in medical laboratory testing. Except for a type B6, general medical license, the Agency shall not combine a category B license with a license of any other category.

1. A broad medical license is any category B license which meets the specifications of R12-1-310(A)(1) and meets the requirements of 12 A.A.C. 1, Article 7. A broad medical license may authorize any medical use other than teletherapy.
2. A medical materials class A license is any specific category B license other than a broad medical license, which authorizes the use of radiopharmaceuticals and sealed sources containing radioactive materials for a therapeutic purpose in quantities which require hospitalization of the patient for radiation safety purposes. The license may authorize other radioactive materials and other medical uses, except teletherapy.
3. A medical materials class B license is any specific category B license which authorizes the diagnostic or therapeutic use, other than teletherapy, of radioactive materials only in limited quantities such that the patient need not be hospitalized for radiation safety purposes.
4. A medical materials class C license is any specific category B license which authorizes possession of specified radioisotopes only in the form of sealed sources for treat-

ment of the eye or skin or for use in diagnostic medical imaging devices.

5. A medical teletherapy license is a specific category B license which solely authorizes radioisotopes in the form of multi-curie sealed sources for use in external beam therapy. The Agency shall not combine a medical teletherapy license with any other type of category B license.
 6. A general medical license is a registration of the use of radioactive material pursuant to R12-1-306(D) or R12-1-306(E). A general medical license may be combined into a broad medical, medical materials class A, or medical materials class B license.
- C. Category C licenses are those specific or general licenses authorizing the use of radioactive materials in any activity other than those authorized by a category A, B, or D license. Except as specifically authorized in this Section, the Agency shall not combine a category C license with any other type of license.
1. A broad industrial class A license is any category C license which meets the specifications of R12-1-310(A)(1). The Agency may combine a broad industrial class A license with any other category C license except industrial radiography, open field irradiator, or well logging licenses.
 2. A broad industrial class B license is any category C license other than a broad industrial class A license which meets the specifications of R12-1-310(A)(2). The Agency may combine a broad industrial class B license with any other category C license except industrial radiography, open field irradiator, or well logging licenses.
 3. A broad industrial class C license is any category C license other than a broad industrial class A or B license which meets the specifications of R12-1-310(A)(3). The Agency may combine a broad industrial class C license with any other category C license except industrial radiography, open field irradiator, or well logging licenses.
 4. A limited industrial license is a specific category C license authorizing the possession of the radioactive materials authorized in R12-1-305(A), or R12-1-306(A), (C) or (F) for uses authorized in those subsections, but in quantities greater than authorized by those subsections.
 5. A portable gauge license is a specific category C license which authorizes radioactive materials in the form of sealed sources for use in measuring or gauging devices designed and manufactured to be transported to the location of use. The Agency may combine a portable gauge license with any broad scope industrial license or a fixed gauge class A license.
 6. A fixed gauge class A license is a specific category C license which authorizes the possession of 50 or more measuring or gauging devices containing radioactive materials, where each device is permanently mounted for use at a single location.
 7. A fixed gauge class B license is a specific category C license which authorizes the possession of 1 through 49 measuring or gauging devices containing radioactive materials, where each device is permanently mounted for use at a single location.
 8. A leak detector license is a specific category C license which authorizes the use of radioisotopes in the form of a gas to test hermetic seals on electronic packages.
 9. A gas chromatograph license is a specific category C license which authorizes the use of radioactive materials as ionization sources in gas chromatography or electron capture devices.

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10. A general industrial license means a registration of the use of a material, source, or device generally licensed pursuant to R12-1-305 or R12-1-306, except R12-1-305(B), R12-1-306(D), or R12-1-306(E).
 11. An industrial radiography class A license is a specific category C license which authorizes industrial radiography using sealed radioisotope sources at specific facilities identified in the license conditions or at temporary field job sites.
 12. An industrial radiography class B license is a specific category C license which authorizes industrial radiography using sealed radioisotope sources only at specific facilities identified in the license conditions.
 13. An open field irradiator license is a specific category C license authorizing the use of radioisotopes in the form of sealed sources not permanently mounted within a shielding container, for irradiation of materials.
 14. A self-shielded irradiator license is a specific category C license authorizing the use of radioisotopes in the form of sealed sources for irradiation of materials in a shielding device from which the sources are not removed during irradiation. The Agency may combine a self-shielded irradiator license with any broad license.
 15. A well logging license is a specific category C license which authorizes the use of radioactive material in sealed or unsealed sources for wireline services or field tracer studies.
 16. A research and development license is a specific category C license which authorizes a licensee to utilize radioactive material in unsealed and sealed form for industrial, scientific, or biomedical research, not including administration of radiation or radioactive material to human beings.
 17. A laboratory license is a specific category C license which authorizes a licensee to perform specific in-vitro or in-vivo medical or veterinary testing, while possessing quantities of radioactive material greater than the general license quantities authorized in R12-1-306.
- D.** Category D licenses are the following specific radioactive material licenses. Except for type D4, general industrial; type D5, depleted uranium; type D8 and D9, health physics; and type D14, additional facilities licenses, the Agency shall not combine a category D license with any other license.
1. A distribution license is one which authorizes the commercial distribution of radioactive materials or radioisotopes in products to persons holding an appropriate general or specific license. The Agency shall ensure that a distribution license does not:
 - a. Authorize distribution of radiopharmaceuticals or distribution to persons exempt from regulatory control, or
 - b. Authorize any other use of the radioactive material. An appropriate category C license is required for possession of radioisotopes and their incorporation into products.
 2. A nuclear pharmacy license is one which authorizes the preparation, compounding, packaging, or dispensing of radiopharmaceuticals for use by other licensees.
 3. A nuclear laundry license is one authorizing the collection and cleaning of items contaminated with radioactive materials.
 4. A general industrial license is a registration of a gauging device in accordance with R12-1-306(A). The Agency may combine a general industrial license with a Class A, B, or C broad industrial, limited industrial, portable gauge, or Class A or B fixed gauge license.
 5. A depleted uranium general license is a registration of the use of the general license authorized pursuant to R12-1-305(C) or the use of depleted uranium as a concentrated mass or as shielding for another radiation source within a device or machine. The Agency may combine a depleted uranium general license with a medical teletherapy; Class A, B, or C broad industrial; portable gauge; Class A or B fixed gauge; Class A or B industrial radiography; or self-shielded irradiator license. For registration purposes an applicant shall follow the registration instructions in R12-1-305(C).
 6. A veterinary medicine license is one which authorizes the use of radioactive materials for specific applications in veterinary medicine as authorized in the license.
 7. A general veterinary medicine license is a registration of the use of the general license authorized in R12-1-306(E) in veterinary medicine.
 8. A health physics class A license is one which authorizes the use of radioactive materials for performing instrument calibrations, processing leak test or environmental samples, or providing radiation dosimetry services.
 9. A health physics class B license is one which authorizes only the collection, possession, and transfer of radioactive materials in the form of leak test samples for processing by others.
 10. A secondary uranium recovery license is one which authorizes the extraction of natural uranium or thorium from an ore stream or tailing which is being or has been processed primarily for the extraction of another mineral. The Agency shall not combine a secondary uranium recovery license with any other license.
 11. A low-level, radioactive waste disposal facility license is a license that is issued for a "disposal facility," as that term is used in R12-1-439 and R12-1-442, which has a closure or long-term care plan and is constructed and operated according to the requirements in 10 CFR 61, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 12. A waste processor class A license is one authorizing the incineration, compaction, repackaging, or any other treatment or processing of low-level radioactive waste prior to transfer to another person authorized to receive or dispose of the waste. The Agency shall not combine a waste processor class A license with any other license.
 13. A waste processor class B license is one which authorizes a waste broker to receive prepackaged, low-level radioactive waste from other licensees; combine the waste into shipments; and transfer the waste without treating or processing the waste in any manner and without repackaging except to place damaged or leaking packages into over-packs. The Agency shall not combine a waste processor class B license with any other license.
 14. An additional facility license is an endorsement, by license condition to an existing specific license, authorizing one or more additional separate facilities where radioactive material may be stored or used for a period exceeding six months.
 15. A possession-only license is a license of any other category which authorizes only the possession in storage, but no use of, the authorized materials. A license which has been suspended as an enforcement action is not considered a possession-only license.
 16. A reciprocal license is the registration of the general license authorized by R12-1-320. This license is subject

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- to a special fee as provided by R12-1-1307 but is exempt from annual fees.
17. Reserved
 18. An "unclassified" radioactive material license is one authorizing radioisotopes, physical or chemical forms, possession limits, or uses not included in any other type of license specified in this Section.
 19. A NORM commercial disposal site license is one that authorizes the receipt of waste material contaminated with naturally occurring radioactive material from other licensees for permanent disposal, provided the concentration of the radioactive material does not exceed 74kBq (2,000 picocuries)/gram.
- E.** Category E registrations are those that register the possession of x-ray machine(s) under 12 A.A.C. 1, Article 2. The Agency shall not combine Category E registrations with any other registration.
1. An X-ray machine class A registration is one authorizing the possession of X-ray machines in a hospital or other facility offering inpatient care.
 2. An X-ray machine class B registration is one authorizing the possession of X-ray machines in a medical, osteopathic, or chiropractic office or clinic not offering inpatient care; or the possession of X-ray machines in a school, college, university, or other teaching facility.
 3. An X-ray machine class C registration is one authorizing the possession of X-ray machines in dental, podiatry, and veterinarian offices or clinics.
 4. An industrial radiation machine registration is one authorizing the possession of X-ray machines, or the possession of particle accelerators not capable of producing a high radiation area, in a nonmedical facility.
 5. An accelerator facility registration is one authorizing the possession and operation of one or more particle accelerators of any kind capable of accelerating any particle and producing a high radiation area.
 6. A radiation machine, "other," is one authorizing possession or use of an ionizing radiation machine not included in any other category specified in subsection (E).
- F.** Category F registrations are those that register nonionizing radiation producing sources regulated under 12 A.A.C. 1, Article 14. The Agency shall not combine Category F registrations with any other registration categories that have a difference in fee per unit.
1. A tanning registration authorizes the commercial operation of any number of tanning booths, beds, cabinets, or other devices in a single establishment.
 2. A Class A laser registration authorizes the operation of one to 10 laser devices subject to R12-1-1433.
 3. A Class B laser registration authorizes the operation of 11 to 49 laser devices subject to R12-1-1433.
 4. A Class C laser registration authorizes operation of 50 or more laser devices subject to R12-1-1433.
 5. A laser light show registration authorizes the operation of a laser device subject to R12-1-1441.
 6. A medical laser registration authorizes the operation of one or more laser devices subject to R12-1-1440.
 7. A Class II surgical device registration authorizes the operation of one or more Class II surgical devices subject to R12-1-1438. A device is designated as a Class II surgical device by the USFDA and is labeled as such by the manufacturer.
 8. A medical radiofrequency device registration authorizes the operation of one or more medical radiofrequency devices.
 9. A class A industrial radiofrequency device registration authorizes the operation of one to five radiofrequency heat sealers or industrial microwave ovens.
 10. A class B industrial radiofrequency device registration authorizes the operation of six to 20 radiofrequency heat sealers or industrial microwave ovens.
 11. A class C industrial radiofrequency device registration authorizes the operation more than 20 radiofrequency heat sealers or industrial microwave ovens.
 12. A class A medical radiofrequency device registration authorizes the operation of one or two radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 13. A class B medical radiofrequency device registration authorizes the operation of three to nine radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 14. A class C medical radiofrequency device registration authorizes the operation of 10 to 19 radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 15. A class D medical radiofrequency device registration authorizes the operation of 20 or more radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 16. An "other" nonionizing radiation device authorizes the operation of a nonionizing radiation device or other device not included in any other category specified in subsection (F).

Historical Note

Adopted effective November 19, 1982 (Supp. 82-6).
 Amended effective November 28, 1983 (Supp. 83-6).
 Section repealed, new Section adopted effective November 5, 1993 (Supp. 93-4). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).
 Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).
 Amended by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).
 Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4). Amended by final rulemaking at 21 A.A.R. 289, effective April 6, 2015 (Supp. 15-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1303. Fee for Initial License and Initial Registration

An applicant shall remit for a new license or new registration the appropriate fee as prescribed in R12-1-1306.

Historical Note

Adopted effective November 19, 1982 (Supp. 82-6).
 Amended effective November 28, 1983 (Supp. 83-6).
 Amended subsections (A), (C), and (D) effective November 28, 1986 (Supp. 86-6). Section repealed, new Section adopted effective November 5, 1993 (Supp. 93-4).
 Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1304. Annual Fees for Licenses and Registrations

A. Each license or registration issued by the Agency shall identify the category by a letter and number corresponding to the

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appropriate subsection of R12-1-1302 or category type listed in R12-1-1306.

- B. Except for types D16 and D17, each licensee or registrant shall submit payment of the annual fee in the amount prescribed in R12-1-1306(A) on or before January 1 of each year. This single annual fee will cover any and all renewals, amendments, and regular inspections of the license during the forthcoming calendar year.
- C. If a licensee or registrant fails to pay the annual fee by January 1, the license is not current.
- D. If a licensee or registrant fails to pay the annual fee by April 1, the Agency shall apply administrative sanction provisions of 12 A.A.C. 1, Article 12.
- E. A licensee who is required to pay an annual fee under this Article may qualify as a small entity. If a licensee qualifies as a small entity and provides the Agency with proper certification along with its annual fee payment, the licensee may pay reduced annual fees as shown in Table 1 to this Article. Failure to file a small entity certification in a timely manner may result in the denial of any refund.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4).
 Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1305. Method of Payment

- A. An applicant licensee or registrant shall pay fees by check or money order, payable to the "State of Arizona" at the address shown on the application, license, registration, or renewal notice.
- B. Once a license or registration has been issued, no portion of the application fee or any annual fee will be refunded.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4).
 Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1306. Table of Fees

- A. The application and annual fee for each category and type are shown in Table 13-1.

Table 13-1

Category	Type	Annual fee
A1.	Broad academic class A	\$5,800
A2.	Broad academic class B	\$5,800
A3.	Broad academic class C	\$5,800
A4.	Limited academic	\$1,000
B1.	Broad medical	\$11,000
B2.	Medical materials class A	\$1,900
B3.	Medical materials class B	\$1,900
B4.	Medical materials class C	\$1,900
B5.	Medical teletherapy	\$5,200
B6.	General medical	\$250
C1.	Broad industrial class A	\$11,400
C2.	Broad industrial class B	\$11,400
C3.	Broad industrial class C	\$3,200
C4.	Limited industrial	\$700
C5.	Portable gauge	\$1,000
C6.	Fixed gauge class A	\$1,000
C7.	Fixed gauge class B	\$1,000
C8.	Leak detector	\$1,330
C9.	Gas chromatograph	\$1,000
C10.	General industrial	No Fee

C11.	Industrial radiography class A	\$5,500
C12.	Industrial radiography class B	\$5,500
C13.	Open field irradiator	\$3,000
C14.	Self-shielded irradiator	\$1,500
C15.	Well logging	\$2,000
C16.	Research and development	\$2,100
C17.	Laboratory	\$1,000
D1.	Distribution	\$2,600
D2.	Nuclear pharmacy	\$4,600
D3.	Nuclear laundry	\$10,300
D4.	General industrial (with fee)	\$300
D5.	General depleted uranium	\$200
D6.	Veterinary medicine	\$1,000
D7.	General veterinary medicine	\$200
D8.	Health physics class A	\$3,200
D9.	Health physics class B	\$1,000
D10.	Secondary uranium recovery	\$5,100
D11.	Low-level radioactive waste disposal site(3)	
D12.	Waste processor class A	\$4,600
D13.	Waste processor class B	\$3,600
D14.	Additional storage and use site(1)	
D15.	Possession only(2)	
D16.	Reciprocal(3)	
D17.	Reserved	
D18.	Unclassified	Full Cost
D19.	NORM commercial disposal site	\$600,000
E1.	X-ray machine class A (per tube)	\$75
E2.	X-ray machine class B (per tube)	\$51
E3.	X-ray machine class C (per tube)	\$42
E4.	Industrial radiation machine (per device)	\$42
E5.	Accelerator facility	\$750
E6.	Other ionizing radiation machine	Full Cost
F1.	Tanning device (per device)	\$28
F2.	Class A (1 to 10 laser devices)	\$175
F3.	Class B (11 to 49 laser devices)	\$408
F4.	Class C (50 or more laser devices)	\$699
F5.	Laser light show or laser demonstration	\$408
F6.	Medical laser (per laser device)	\$47
F7.	Class II surgical (per device)	\$47
F8.	Medical RF surgical and cosmetic (per device)	\$47
F9.	Class A industrial (1 to 5 radiofrequency devices)	\$70
F10.	Class B industrial (6 to 20 radiofrequency devices)	\$210
F11.	Class C industrial more than 20 radiofrequency devices)	\$349
F12.	Class A medical (1 or 2 non-cosmetic radiofrequency devices) (per device)\$0	
F13.	Class B medical (3 to 9 non-cosmetic radiofrequency devices).....\$0	
F14.	Class C medical (10 to 19 non-cosmetic radiofrequency devices).....\$0	
F15.	Class D medical (20 or more non-cosmetic radiofrequency devices).....\$0	
F16.	Other nonionizing radiation device or other device	Full Cost

Notes: (1) An additional 30% of the annual base fee is added to the annual base fee for each additional site.

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- (2) The fee is 50% of the annual base fee for the category under which the radioactive material will be stored.
- (3) See R12-1-1307.

- B. The application fee for a licensee or registrant is the annual fee as shown in R12-1-1306. "Full Cost" is based on professional personnel time for preparation, travel, onsite inspection, any reports, review of findings, and preparation of the license or registration or denial charged at \$99 per hour and mileage charged at 44.5¢ per mile. The Agency shall assess the licensee or registrant 90% of the estimated full cost of issuing the license or registration. The Agency will assess for any remaining costs when it is prepared to issue the license, registration, denial, or if Agency costs for the requested activity exceed \$10,000.
- C. The annual fee for a licensee or registrant for which the scheduled fee is "Full Cost" is based on professional personnel time for preparation, travel, onsite inspection, preparation of reports, review of findings, and preparation for any inspections or completion of any amendments to the license, registration or denials charged at \$99 per hour and mileage charged at 44.5¢ per mile for the preceding 12 months.

Historical Note

Amended effective November 5, 1993 (Supp. 93-4). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4). Amended by final rulemaking at 21 A.A.R. 289, effective April 6, 2015 (Supp. 15-1).

R12-1-1307. Special License Fees

- A. The fee for a Type D16 license providing reciprocal recognition under R12-1-320 of a radioactive materials license issued by the U.S. NRC or another state is half of the annual fee for an Arizona license of the appropriate type. The fee is due and payable at the time reciprocity is requested, and the general license does not become current until the fee is paid.
- B. For a low-level radioactive waste disposal site the initial application fee is \$6,000,000. The annual fee for the second through fifth years is \$6,000,000. The Agency shall promulgate a new fee rule for years subsequent to year five. Based on data gathered during the first five years, the Agency shall set a reasonable fee after consideration of the following factors:
 - 1. Unrecovered costs which the Agency may charge under A.R.S. § 30-654(B)(18).
 - 2. Actual costs incurred by the Agency.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1308. Fee for Requested Inspections

- A. A licensee or registrant may request an inspection of its facility at any time. The Agency shall assess the licensee or registrant the full cost of the inspection, based on personnel time for preparation, travel, onsite inspection, review of findings, and preparation of a report, charged at \$99 per hour and mileage charged at 44.5¢ per mile.
- B. The fee specified in this Section does not apply to:
 - 1. Regular inspections as scheduled by the Agency,

- 2. Enforcement reinspections conducted to ensure the correction of violations or safety hazards, or
- 3. Inspections requested by workers pursuant to R12-1-1007.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1309. Abandonment of License or Registration Application

- A. Any license or registration application for which the applicant has been provided a written notification of deficiencies in the application and for which the applicant does not make a written attempt to supply the requested information or request an extension in writing within 90 days of the date of the written notice of deficiencies, is considered abandoned and will not be processed.
- B. If an applicant does not act in the time-frame specified in subsection (A), the applicant shall submit a new application with the appropriate fee.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

Table 1. Small Entity Fees¹

Small Businesses Not Engaged in Manufacturing and Small Not-for-profit Organizations (Gross Annual Receipts, three-year average):	
>\$6.5 million	Pay the fee listed in R12-1-1306
\$350,000 to \$6.5 million	\$2,200
<\$350,000	\$500
Manufacturing Entities that Have an Annual Average of 500 Employees or Less:	
>500 employees	Pay the fee listed in R12-1-1306
35 to 500 employees	\$2,200
<35 employees	\$500
Small Government Jurisdictions (including publicly supported educational institutions) (Population in Jurisdiction):	
>50,000	Pay the fee listed in R12-1-1306
20,000 to 50,000	\$2,200
<20,000	\$500
Educational Institutions that Are Not State or Publicly Supported, and Have 500 Employees or Less:	
>500 employees	Pay the fee listed in R12-1-1306
35 to 500 employees	\$2,200
<35 employees	\$500

- 1. A licensee who seeks to establish status as a small entity for the purpose of paying the annual fees required under R12-1-1304 as shown in R12-1-1306 must file a certification statement with the Agency each year. The licensee must file the required certification on Agency Form 333 for each license under which it was billed. Agency Form 333 can be accessed through the Agency web site at <http://www.azrra.gov>. For licensees who cannot access the Agency web site, Agency Form 333 may be obtained by writing to the Agency or by telephoning the Agency at (602) 255-4845, or by e-mailing the Agency at webcontactform@arrawebsite.com.

Historical Note

New Table made by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

ARTICLE 14. REGISTRATION OF NONIONIZING RADIATION SOURCES AND STANDARDS FOR PROTECTION AGAINST NONIONIZING RADIATION

R12-1-1401. Registration of Nonionizing Radiation Sources and Service Providers

- A. A person shall not use a nonexempt nonionizing radiation source, unless the source is registered by the Agency.
- B. A person who possesses a nonexempt nonionizing source shall submit to the Agency an application for registration within 30 days of its first use.
1. A person who possesses a nonexempt source listed in R12-1-1302(F) shall register the source with the Agency.
 2. A person applying for the registration of a nonexempt source shall use an application form provided by the Agency.
 3. An applicant shall provide the information identified in Appendix B of this Article.
- C. A registrant shall notify the Agency within 30 days of any change to the information contained in the registration, or sale of a source that results in termination of the activities conducted under the registration.
- D. In addition to the application form, an applicant shall remit the applicable registration fee, specified in R12-1-1306.
- E. A person who is operating more than one facility, where one or more nonexempt nonionizing sources are used, shall apply for a separate registration for each facility.
- F. A person in the business of installing or servicing nonexempt nonionizing sources shall apply to the Agency for registration 30 days before furnishing the service. The person shall apply for registration on a form furnished by the Agency and shall provide the information required by A.R.S. § 30-672.01.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). New Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1402. Definitions

General definitions:

“Controlled area” means any area to which human access is restricted for the purpose of protection from nonionizing radiation.

“Direct supervision” means that a licensed practitioner supervises the use of a source for medical purposes while the practitioner is present inside the facility where the source is being used.

“Indirect supervision” means: for lasers or IPL devices used for hair removal procedures, there is at a minimum, responsible supervision and control by a licensed practitioner who is easily accessible by telecommunication.

“Licensed practitioner” (See R12-1-102)

“Medical director” means a licensed practitioner, as defined in R12-1-102, who delegates a laser, IPL, or other light-emitting medical device procedure to a non-physician and is qualified to perform the procedure within the scope of practice of the license.

“Nonexempt nonionizing source” means any system or device that contains a nonionizing source listed in R12-1-1302(F).

“Operator” means a person who is trained in accordance with this Article and knowledgeable about the control and function of a nonionizing device regulated under this Article.

“Other cosmetic procedure” means a method of using medical lasers or intense pulse light (IPL) devices approved by the Federal Food and Drug Administration (FDA), for the cosmetic purpose of spider vein removal, skin rejuvenation, non-

ablative skin resurfacing, skin resurfacing, port wine stain removal, epidermal pigmented skin lesion removal, or tattoo removal; and does not include hair removal.

Laser definitions:

“Accessible emission limit (AEL)” means the maximum accessible emission level of laser or collateral radiation permitted within a particular class.

“Accessible radiation” means laser or collateral radiation to which human access is possible.

“Angular subtense” means the apparent visual angle, α , as calculated from the source size and distance from the eye.

“Aperture” means an opening in the protective housing or other enclosure of a laser product, through which laser or collateral radiation is emitted, allowing human access to the radiation.

“Aperture stop” means an opening serving to limit the size and to define the shape of the area over which radiation is measured.

“Certified laser product” means that the product is certified by a manufacturer in accordance with the requirements of 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“CDRH” means the Center for Devices and Radiological Health.

“Classes of lasers” means the following categories of lasers, defined in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency: Class 1, Class 2, Class 2a, Class 3, Class 3a, Class 3b, and Class 4. This incorporation by reference contains no future editions or amendments.

“Collateral radiation” means any electronic product radiation, except laser radiation, emitted by a laser product as a result of operation of the laser or any component of the laser product that is physically necessary for operation of the laser. The accessible emission limits for collateral radiation are specified in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Continuous wave” (cw) means the output of a laser that is operated in a continuous rather than a pulsed mode. For purposes of this Article, a laser operating with a continuous output for a period ≥ 0.25 seconds, is regarded as a cw laser.

“Cosmetic procedure protocol” means a delegated written authorization to select specific laser or IPL settings, initiate a laser or IPL procedure, and conduct necessary follow-up procedures.

“Demonstration laser” means any laser manufactured, designed, intended, or used for purposes of demonstration, entertainment, advertising display, or artistic composition.

“Embedded laser” means an enclosed laser with an assigned class number higher than the inherent capability of the laser system in which it is incorporated, where the system’s lower classification is due to engineering features that limit accessible emission.

“Enclosed laser” means a laser that is contained within its own protective housing or the protective housing of a laser or laser system in which it is incorporated. Opening or removing the protective housing provides more access to laser radiation above the applicable MPE than is possible with the protective

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housing in place. (An embedded laser is a type of enclosed laser.)

“Federal performance standards for light-emitting products” means the regulations in 21CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives, and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Human access” means the capacity to intercept laser or collateral radiation by any part of the human body.

“Incident” means an event or occurrence that results in actual or suspected accidental exposure to laser radiation that has caused or is likely to cause biological damage.

“Integrated radiance” means radiant energy per unit area of a radiating surface per unit solid angle of emission, expressed in joules per square centimeter per steradian.

“Irradiance” means the time-averaged radiant power incident on an element of a surface divided by the area of that element, expressed in watts per square centimeter.

“Laser” See the definition in Article 1.

“Laser energy source” means any device intended for use in conjunction with a laser to supply energy for the operation of the laser. General energy sources, such as electrical supply mains or batteries, are not considered laser energy sources by the Agency.

“Laser facility” means a facility where one or more lasers are used. For purposes of this definition a Class 1 facility is a facility that has one or more Class 1 lasers; a Class 2 facility is a facility that has one or more Class 2 or 2a lasers; a Class 3 facility is a facility that has one or more Class 3, 3a, or 3b lasers, and a Class 4 facility is a facility that has one or more Class 4 lasers. Facilities that contain more than one laser class are classified according to the highest laser class in use at the facility.

“Laser product” means any manufactured product or assemblage of components that constitutes, incorporates, or is intended to incorporate a laser or laser system. A laser or laser system that is intended for use as a component of an electronic product is itself considered a laser product.

“Laser protective device” means any device used to reduce or prevent exposure of personnel to laser radiation. This includes: protective eyewear, garments, engineering controls, and operational controls.

“Laser radiation” means all electromagnetic radiation emitted by a laser product, within the spectral range specified in the definition of “laser,” which is produced as a result of controlled stimulated emission or that is detectable with radiation so produced through the appropriate aperture stop and within the appropriate solid angle of acceptance.

“Laser Safety Officer (LSO)” - means any individual, qualified by training and experience in the evaluation and control of laser hazards, who is designated by the registrant and has the authority and responsibility to establish and administer the laser radiation protection program for a particular class of facility.

“Laser system” means a laser in combination with an appropriate laser energy source with or without additional incorporated components.

“Limited exposure duration (T_{max})” means an exposure duration that is specifically limited by design or intended use.

“Maintenance” means performance of those adjustments or procedures specified in operator information provided by the manufacturer with the laser product, which are to be performed by the operator to ensure the intended performance of

the product. The term does not include operation or service as defined in this Section.

“Maximum permissible exposure (MPE)” means the level of laser radiation to which a person may be exposed without hazardous effect or adverse biological changes in the eye or skin. MPE values for eye and skin exposure are listed in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Medical laser product” means any laser product that is a medical device defined in 21 U.S.C. 321(h) and is manufactured, designed, intended, or promoted for in vivo laser irradiation of any part of the human body for the purpose of: diagnosis, surgery, therapy, or relative positioning of the human body.

“Operation” means the performance of the laser product over the full range of its function. It does not include maintenance or service as defined in this Section.

“Protective housing” means those portions of a laser product that are designed to prevent human access to laser or collateral radiation in excess of the prescribed accessible emission limits under conditions specified in this Article.

“Pulse duration” means the time increment measured between the half-peak-power points at the leading and trailing edges of a pulse.

“Pulse interval” means the period of time between identical points on two successive pulses.

“Radiance” means the time-averaged radiant power per unit area of a radiating surface per unit solid angle of emission, expressed in watts per square centimeter per steradian.

“Radiant energy” means energy emitted, transferred, or received in the form of radiation, expressed in joules.

“Radiant exposure” means the radiant energy incident on an element of a surface divided by the area of that element, expressed in joules per square centimeter.

“Radiant power” means the time-averaged power emitted, transferred, or received in the form of radiation, expressed in watts.

“Rule of nines” means a method for estimating the extent of burns, expressed as a percentage of total body surface. In this method the body is divided into sections of 9 percent or multiples of 9 percent, each: head and neck, 9 percent; anterior trunk, 18 percent; posterior trunk, 18 percent; upper limbs, 18 percent; lower limbs, 36 percent; and genitalia and perineum, 1 percent.

“Safety interlock” means a device associated with the protective housing of a laser product to prevent human access to excessive radiation.

“Sampling interval” means the time interval during which the level of accessible laser or collateral radiation is sampled by a measurement process. The magnitude of the sampling interval in units of seconds is represented by the symbol “t”.

“Secured enclosure” means an area to which casual access is impeded by various means, such as a door secured by a lock, latch, or screws.

“Service” means the performance of those procedures or adjustments described in the manufacturer’s service instructions that may affect any aspect of the product’s performance. The term does not include maintenance or operation as defined in this Section.

“ T_{max} ” See limited exposure duration.

“Uncertified laser product” means any laser that has not been certified in accordance with the requirements of 21CFR 1040.10, April 1, 2004, which is incorporated by reference,

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published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Radio frequency and microwave radiation definitions:

“Accessible emission level” means the level of radio frequency radiation emitted from any source, expressed in terms of power density in milliwatts per square centimeter or electric and magnetic field strength, as applicable, and to which human access is normally possible.

“Far field region” means the area in which locally uniform distribution of electric and magnetic field strengths exists in planes transverse to the direction of propagation. The far field region is presumed to exist at distances greater than $2D^2/\lambda$ from the antenna, where λ is the wavelength and D is the largest antenna aperture dimension.

“Maximum permissible exposure MPE” means the rms and peak electric and magnetic field strengths, their squares, or the plane-wave equivalent power densities associated with these fields and the induced and contact currents to which a person may be exposed without harmful effect and with an acceptable safety factor.

“Near field region” means the area near an antenna in which the electric and magnetic field components vary considerably in strength from point to point. For most antennas the outer boundary of the region is presumed to exist at a distance $\lambda/2\pi$ from the antenna surface, where λ is the wavelength.

“Radio frequency controlled area” means any location to which access is controlled for the purpose of protection from radio frequency radiation.

“Radio frequency source” means a source or system that produces electromagnetic radiation in the radio frequency spectrum.

“Radio frequency radiation” means electromagnetic radiation (including microwave radiation) with frequencies in the range of 0.3 megahertz to 100 gigahertz.

“Root-mean-square (rms)” means the effective value, or the value associated with joule heating, of a periodic electromagnetic wave. The rms is obtained by taking the square root of the mean of the squared value of a function.

“Safety device” means any mechanism incorporated into a radio frequency source that is designed to prevent human access to excessive levels of radio frequency radiation.

Ultraviolet, high intensity light, and intense pulsed light source definitions:

“EPA” means the United States Environmental Protection Agency.

“FDA” means the United States Food and Drug Administration.

“High intensity mercury vapor discharge (HID) lamp” means any lamp, including a mercury vapor or metal halide lamp that incorporates a high-pressure arc discharge tube with a fill that consists primarily of mercury and is contained within an outer envelope, except the tungsten filament self-ballasted mercury vapor lamp.

“Intense pulsed light device (IPL)” means, for purposes of R12-1-1438, any lamp-based device that produces an incoherent, filtered, and intense light.

“Maximum exposure time” means the greatest continuous exposure time interval recommended by the manufacturer of a product.

“Protective sunlamp eyewear” means any device designed to be worn by a user of a product to reduce exposure of the eyes to radiation emitted by the product.

“Sanitize” means treat the surfaces of equipment and devices using an EPA or FDA registered product that provides a speci-

fied concentration of chemicals, for a specified period of time, to reduce the bacterial count, including pathogens, to a safe level.

“Self-extinguishing lamp” means any HID lamp that ceases operation in conformance with the requirements of the performance standard in 21 CFR 1040.30(d), April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Sunlamp product” means any electronic product designed to incorporate one or more ultraviolet lamps and intended for irradiation of any part of the living human body, by ultraviolet radiation with wavelengths in air between 200 and 400 nanometers, to induce skin tanning.

“Timer” means any device incorporated into a product that terminates radiation emission after a preset time interval.

“Ultraviolet lamp” means any light source that produces ultraviolet radiation and that is intended for use in any sunlamp product.

“Ultraviolet radiation” means electromagnetic radiation in the wavelength interval from 200 to 400 nanometers in air.

“User” means any member of the public who is provided access to a tanning device in exchange for a fee or other compensation, or any individual who, in exchange for a fee or other compensation, is afforded use of a tanning device as a condition or benefit of membership or access.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4). Amended by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1).

R12-1-1403. General Safety Provisions and Exemptions

- A.** Based on consideration of the following factors, the Agency may waive compliance with specific requirements of this Article:
1. Whether compliance requires product replacement or substantial modification of a product’s current installation, and
 2. Whether the registrant provided information requested by the Agency to determine if there are alternative methods of achieving the same or a greater level of radiation protection.
- B.** The registrant shall:
1. Ensure that any nonionizing source is operated by an individual who is trained and has demonstrated competence in the safe use of the source.
 2. Provide safety rules to each individual who operates a nonionizing radiation source and determine whether the individual is aware of operating restrictions and procedures associated with the safe use of the source.
 3. Make, or cause to be made, any physical radiation surveys required by this Article.
 4. Maintain the following records for three years for Agency review:
 - a. Results of any physical survey or calibration required by this Article;
 - b. Radiation source inventories;
 - c. Maintenance, service, and modification records; and
 - d. Incident reports of known or suspected exposure to nonionizing radiation that exceeds any MPE specified in this Article.

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- C. A registrant shall not operate a nonionizing radiation source unless the source complies with all of the applicable requirements of this Article.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1404. Radio Frequency Equipment

- A. A registrant shall operate a radiation source that emits radio frequency radiation in a radio frequency controlled area, in a manner that will prevent human exposure that exceeds the MPE specified in IEEE Std C95.1-1999, Institute of Electrical and Electronics Engineers Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz, 1999 edition, which is incorporated by reference, published by the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th Street, New York, NY 10017, and on file with the Agency. This incorporation by reference contains no future editions or amendments. The registrant shall post each point of access into a radio frequency controlled area according to R12-1-1406.
- B. If a registrant is required to operate a radio frequency source in a controlled area, the registrant shall employ visual or audible emission indicators that function only during production of radiation.
- C. If a source of radio frequency emissions is physically separate from the source's means of activation by a distance greater than 2 meters, the registrant shall place a visual or an audible emission indicator at the source and the point of activation.
- D. A registrant shall place each visual emission indicator so that the location of the indicator does not require human exposure to radio frequency radiation that exceeds the applicable MPE.
- E. A registrant shall inspect each safety device designed to prevent human exposure to excessive radio frequency radiation for proper operation at intervals that do not exceed one month.
- F. If a machine emits mechanically scanned radio frequency radiation, a registrant shall ensure that the machine cannot, as the

result of scan failure or any other malfunction, cause a change in angular velocity or amplitude, allowing human exposure that exceeds the applicable MPE.

- G. A registrant shall physically secure each radio frequency sources to prevent unauthorized use and tampering.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1405. Radio Frequency Radiation: Maximum Permissible Exposure

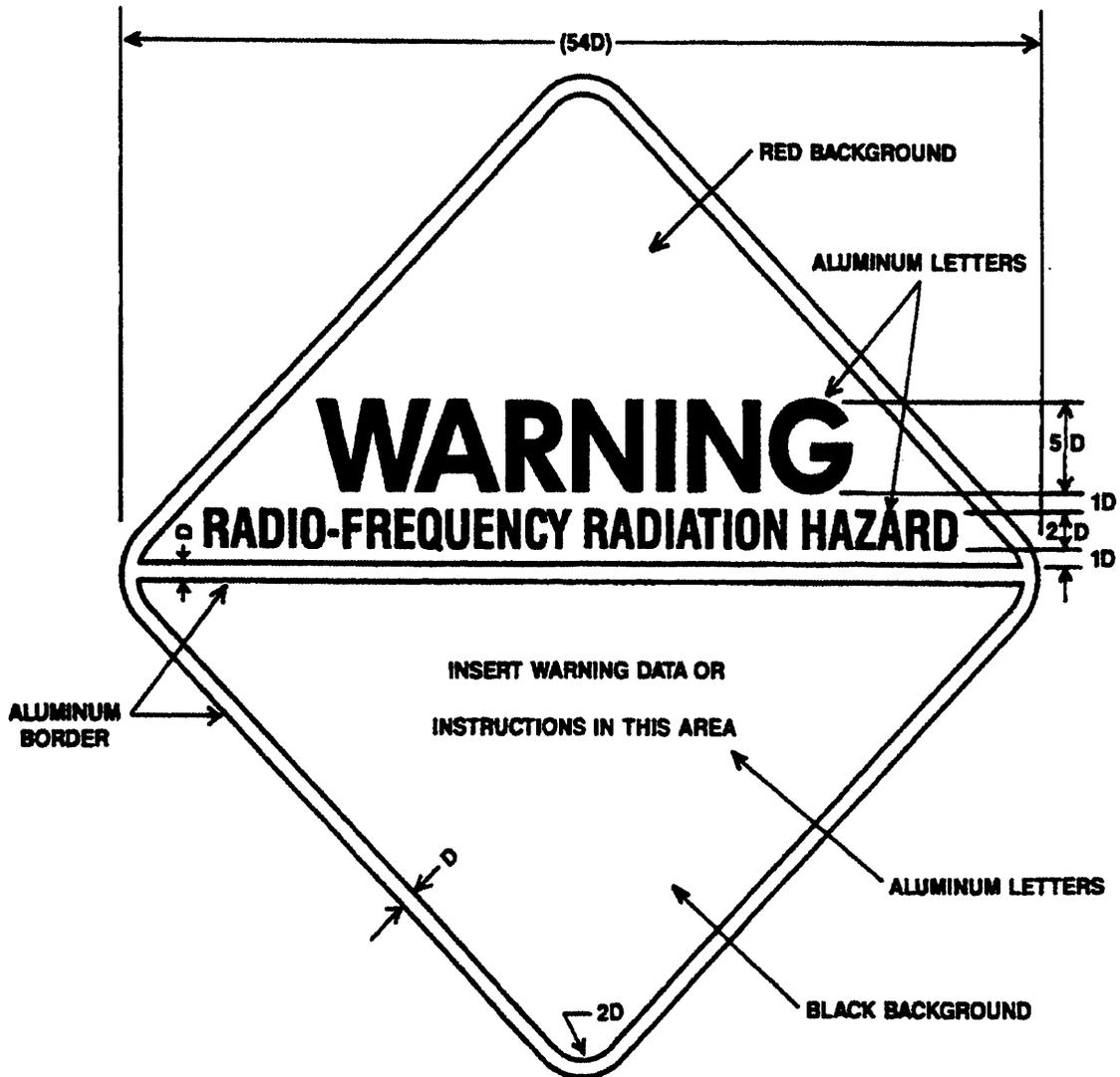
- A. A registrant shall not expose a person to radio frequency radiation that exceeds the applicable MPE specified in IEEE Std C95.1-1999, Institute of Electrical and Electronics Engineers Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz, 1999 edition, which is incorporated by reference, published by the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th Street, New York, NY 10017, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- B. At frequencies between 300 kHz and 100 GHz a registrant may exceed the applicable MPE if exposure conditions can be shown by laboratory procedures to produce specific absorption rates (SARs) above 0.4 watts per kilogram, averaged over the whole body, and spatial peak SAR values above 8 watts per kilogram, averaged over 1 gram of tissue.
- C. At frequencies between 300 kHz and 1 GHz, a registrant may exceed the applicable MPE, if the radio frequency input power to the radiating device is seven watts or less.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1406. Radio Frequency Hazard Caution Signs, Symbols, Labeling, and Posting

A. A registrant shall post each point of access to a controlled area with caution signs of the type designated in Figure 1.



1. Place handling and mounting instructions on reverse side.
2. D = Scaling unit
3. Lettering: Ratio of letter height to thickness of letter lines.
 - Upper triangle: 5 to 1 Large
6 to 1 Medium
 - Lower triangle: 4 to 1 Large
6 to 1 Medium
4. Symbol is square, triangles are right-angle isosceles.

Fig. 1

B. A registrant shall post operating procedure restrictions or limitations, used to prevent unnecessary or excessive exposure to radio frequency radiation, in a location visible to the operator.

C. A registrant shall place each warning sign or label so that an observer is not exposed to radio frequency radiation that exceeds the applicable MPE.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1).

Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

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R12-1-1407. Microwave Ovens

A person shall register with the Agency any microwave oven that does not meet the requirements in 21 CFR 1030.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1408. Reporting of Radio Frequency Radiation Incidents

- A. A registrant shall report in writing to the Agency within 15 days of a known or suspected personnel exposure to radiation that exceeds the applicable MPE incorporated by reference in R12-1-1405.
- B. A registrant shall report to the Agency within 24 hours of a known or suspected personnel exposure to radiation that exceeds 150% of an applicable MPE incorporated by reference in R12-1-1405.
- C. A registrant shall immediately report to the Agency a known or suspected personnel exposure to radiation that exceeds 500% of an applicable MPE incorporated by reference in R12-1-1405.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1409. Medical Surveillance for Workers Who May Be Exposed to Radio Frequency Radiation

- A. Upon request by the Agency, a registrant shall provide a medical examination to an individual exposed to radiation reported to the Agency according to R12-1-1408.
- B. A registrant shall provide a copy of the results to the Agency if an individual undergoes a medical examination, requested under subsection (A).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1410. Radio Frequency Compliance Measurements

- A. For obtaining measurements to determine compliance with R12-1-1405, the Agency shall use an instrument capable of measuring the field strength and frequency of radiation.
- B. The Agency shall ensure that each instrument used for compliance measurements is calibrated every 12 months. The calibration shall be performed in a manner that meets the standards in IEEE Std C95.1-1999, incorporated by reference in R12-1-1404(A).
- C. For compliance measurements of exposure conditions in the near field, the Agency shall obtain measurements of both the electric and magnetic field components. The applicable protection standards for near field measurements are the mean squared electric and magnetic field strengths (using the applicable MPE) referenced in R12-1-1405.
- D. If the Agency is obtaining measurements to determine compliance in far field exposure conditions, the Agency may use measurements of power density in milliwatts per square centimeter or the calculated equivalent plane wave power density,

based on measurement of either the electric or magnetic field strength. The applicable protection standards are the power density values (using the applicable MPE) referenced in R12-1-1405.

- E. In obtaining measurements in accordance with this Section, the Agency shall measure the electric and magnetic field strength:
 1. Obtained at an emission frequency of 300 megahertz or less; and
 2. Expressed in terms of power density.
- F. For mixed or broadband fields at frequencies for which there are different protection standards, the Agency shall determine the fraction of the applicable MPE incurred within each frequency interval. To achieve compliance the sum of all the fractions shall not exceed unity (1).
- G. The Agency shall obtain compliance measurements at a distance of five centimeters or greater from any object.
- H. A registrant shall obtain measurements that are averaged over a six-minute period for pulsed and non-pulsed modes of radio frequency emission and make a correction for duty cycle in determining the average field strength.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1411. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1412. Tanning Operations

A registrant shall establish and maintain written policies and procedures that are part of a radiation safety program to assure compliance with the requirements in R12-1-1412 through R12-1-1416.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1413. Tanning Equipment Standards

- A. A registrant operating a tanning facility shall use sunlamp products that are certified by the manufacturer to comply with 21 CFR 1040.20, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments. For sunlamp products in use before the effective date of this Article, the Agency shall determine compliance based on the standard in effect at the time of manufacture, as shown on the equipment identification label.
- B. A registrant shall replace burned-out or defective lamps or filters, before any use of a tanning device.
- C. A registrant shall replace a burned-out or defective lamp or filter with a lamp or filter intended for use in that equipment, as specified on the sunlamp product label, or that is equivalent to a lamp or filter specified on the sunlamp product label under the FDA regulations and polices applicable to the sunlamp product at the time of manufacture. If an equivalent lamp or filter is used instead of the Original Equipment Manufacturer (OEM) lamp or filter specified on the product label, the regis-

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trant shall maintain a copy of the equivalency certification, provided by the lamp supplier, on file for review by Agency inspectors.

- D.** A registrant shall ensure that each sunlamp product has a timer and control system that complies with 21 CFR 1040.20(c), April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments. In addition the registrant shall ensure that:
1. The timer interval does not exceed the manufacturer's maximum, recommended exposure time;
 2. The timer is functional and accurate to within +/- 10% of the maximum timer interval of the product;
 3. The timer does not automatically reset and cause radiation emission to resume for a period greater than the unused portion of the timer cycle;
 4. The timer is tested annually for accuracy;
 5. For a new facility (including existing facilities with change of ownership) a remote timer control system is installed before operation of sunlamp products. For an existing facility that has sunlamp products not equipped with a remote timer control system, a remote timer control system (outside of the sunlamp product room) is installed no later than 6 months after the effective date of this Section; and
 6. Each sunlamp product is equipped with an emergency shutoff mechanism that allows manual termination of the UV exposure by the user.
- E.** A registrant shall provide physical barriers between each sunlamp product to protect users from injury caused by touching or breaking a lamp.
- F.** A registrant that employs a stand-up sunlamp product shall:
1. Use physical barriers, handrails, floor markings, or other methods to indicate the proper exposure distance between the ultraviolet lamps and the user's skin;
 2. Construct each tanning booth so that it can withstand the stress of use and the impact of a falling person;
 3. Provide access to a tanning booth with doors of rigid construction that open outward, handrails, and non-slip floors; and
 4. Control the interior temperature of a sunlamp product so that it never exceeds 100 degrees Fahrenheit (38 degrees Centigrade).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1414. Tanning Equipment Operators

- A.** A registrant shall ensure that at least one operator is present during operating hours. The operator shall:
1. Limit the occupancy of the tanning room to one person when the tanning equipment is in use;
 2. Prevent use of the tanning equipment by anyone under 18 years of age unless the person has written permission from a parent or guardian;
 3. Limit exposure time to the manufacturer's recommendation on the equipment label or in the operator's manual;
 4. Limit exposure time during a 24-hour period to the maximum recommended for a 24-hour period by the manufacturer; and
 5. Maintain a record of each user's total number of tanning visits and exposure times for Agency inspection. The reg-

istrant shall maintain the records for three years from the date on the record.

- B.** Before use of tanning equipment, an operator shall:
1. Provide the user sanitized protective sunlamp eyewear and directions for its use;
 2. Demonstrate the use of any physical aids, necessary to maintain correct exposure distance for the user, as recommended by the manufacturer of the tanning equipment;
 3. Set the exposure timer so that the user is not exposed to excess radiation;
 4. Instruct the user on the maximum exposure time and correct distance from the radiation source as recommended by the manufacturer of the tanning equipment; and
 5. Instruct the user about the location and correct operation of the emergency shutoff switch.
- C.** An operator shall control a sunlamp's timer. A registrant shall:
1. Provide training to operators that covers:
 - a. The requirements of this Section;
 - b. Facility operating procedures, including:
 - i. Determination of skin type and associated duration of exposure;
 - ii. Procedures for use of minor and adult user consent forms;
 - iii. Potential harm associated with photosensitizing foods, cosmetics, and medications;
 - iv. Requirements for use of protective eyewear by users of the equipment; and
 - v. Proper sanitizing procedures for the facility, equipment, and eyewear;
 - c. The manufacturer's procedures for operation and maintenance of tanning equipment;
 - d. Recognition of injury or overexposure; and
 - e. Emergency procedures used in the case of an injury.
 2. Maintain records of training for Agency review, which include dates and material covered, for three years from the date the training is provided.
 3. Post a list of operators at the facility.
- D.** Before the first use of a tanning facility in each calendar year by a user:
1. An operator shall request that the user read a copy of the warnings in R12-1-1415(A);
 2. The operator shall obtain the user's signature on a statement as an acknowledgment that the user has heard or read and understands the warnings in R12-1-1415(A); and
 3. For illiterate or visually handicapped persons, the operator shall read the warnings in R12-1-1415(A) in the presence of a witness. Both the witness and the operator shall sign the statement described in subsection (D)(2).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1415. Tanning Facility Warning Signs

- A.** A registrant shall post the warning sign shown in this subsection within 1 meter (39.37 inches) of each tanning device, ensuring that the sign is clearly visible and easily viewed by the user before the tanning device is operated.
- B.** A registrant shall post a warning sign, which contains the statement shown, at or near the reception area.
- PERSONS UNDER AGE 18 ARE REQUIRED TO HAVE PARENT OR LEGAL GUARDIAN SIGN AN AUTHORIZATION TO TAN IN THE PRESENCE OF A TANNING FACILITY OPERATOR

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- C. The lettering on each warning sign shall be at least 10 millimeters high for all words shown in capital letters and at least 5 millimeters high for all lower case letters.

DANGER - ULTRAVIOLET RADIATION

1. Follow instructions.
2. Avoid overexposure. As with natural sunlight, exposure can cause eye and skin injury and allergic reactions. Repeated exposure may cause premature aging of the skin, dryness, wrinkling, and skin cancer.
3. Wear protective eyewear.

FAILURE TO USE PROTECTIVE EYEWEAR MAY RESULT IN SEVERE BURNS OR LONG TERM INJURY TO THE EYES.

4. Medications or cosmetics may increase your sensitivity to the ultraviolet radiation. Consult a physician before using a sunlamp if you are using medications or have a history of skin problems or believe you are especially sensitive to sunlight.
5. If you do not tan in the sun, you are unlikely to tan from use of this device.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1416. Reporting of Tanning Injuries

- A. A registrant shall report any incident involving an eye injury; skin burn; fall injury, if the fall occurs within the tanning device or while entering or exiting the device; laceration; infection believed to have been transmitted by use of the tanning device; or any other injury reasonably related to the use of the tanning device.
- B. A registrant shall provide a written report of an incident to the Agency within 10 working days of its occurrence or within 10 working days of the date the registrant became aware of the incident.
- C. The report shall include:
 1. The name of the user;
 2. The name and location of the tanning facility;
 3. A description of and the circumstances associated with the injury;
 4. The name and address of the health care provider treating the user, if any; and
 5. Any other information the registrant considers relevant to the incident.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1417. Repealed

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section repealed by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1418. High Intensity Mercury Vapor Discharge (HID) Lamps

A person shall register with the Agency any HID lamp that does not meet the requirements in 21 CFR 1040.30, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1419. Reserved

R12-1-1420. Reserved

R12-1-1421. Laser Safety

- A. The requirements contained in this Section apply to laser products that are used in accordance with the manufacturer's classification and instructions. If certain engineering controls are impractical during manufacture or research and development activities, the LSO shall specify alternate requirements to obtain equivalent laser safety protection.
- B. A registrant shall establish and maintain a laser radiation safety program.
- C. If R12-1-1433 is applicable, a registrant shall conduct a laser radiation protection survey to ensure compliance with R12-1-1433 before initial use, following system modifications, and at intervals that do not exceed six months. During a survey the registrant shall:
 1. Determine whether each laser protective device is labeled correctly, functioning within the design specifications, and meets required standards for the type and class of laser in use;
 2. Determine whether each warning device is functioning within design specifications;
 3. Determine whether each controlled area is identified, controlled, and posted with accurate warning signs in accordance with this Article;
 4. Reevaluate potential hazards from surfaces that are associated with Class 3 and Class 4 beam paths; and
 5. Evaluate the laser and collateral radiation hazard incident to the use of lasers.
- D. The registrant shall maintain records of:
 1. Results of all physical surveys made to determine compliance with this Article;
 2. Any restriction in operating procedures necessary to prevent unnecessary or excessive exposure to laser or collateral radiation;
 3. Any incident for which reporting to the Agency is required pursuant to R12-1-1436;
 4. Results of medical surveillance to determine extent of injury resulting from exposure to laser or collateral radiation;
 5. Inventory to account for all sources of radiation possessed by the licensee.

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- E. A registrant shall provide the Laser Safety Officer with training that covers the subjects listed in Appendix D.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4). Amended by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

R12-1-1422. Laser Protective Devices

- A. A registrant shall ensure that each laser product has a protective housing that prevents access to laser and collateral radiation if it exceeds the exposure limits for Class 1 lasers in R12-1-1426. If a laser's accessible emission levels must exceed the limits for Class 1 lasers, the registrant shall use a laser from the lowest class that will enable the registrant to perform the intended function.
- B. To prevent access to radiation above the applicable MPE, a registrant shall ensure that each laser has a safety interlock, which prevents operation of the laser if a person has removed any portion of the protective housing that can be removed or displaced without the use of tools during normal operation or maintenance. The registrant shall ensure that:
1. Service, testing, or maintenance of a laser does not render the interlocks inoperative or increase radiation outside the protective housing to levels that exceed the applicable MPE, unless a controlled area is established as specified in R12-1-1433;
 2. For pulsed lasers, interlocks are designed to prevent the laser from firing;
 3. For Class 3b and 4 continuous wave (cw) lasers, interlocks turn off the power supply or interrupt the beam.
 4. An interlock does not allow automatic accessibility to radiation emission above the applicable MPE when the interlock is closed; and
 5. Multiple safety interlocks or a means to preclude removal or displacement of the interlocked portion of the protective housing is provided if failure of a single interlock could result in:
 - a. Human access to levels of laser radiation that exceed the radiant power accessible emission limit for Class 3a laser radiation, or
 - b. Laser radiation that exceeds the accessible emission limit for Class 2, emitted directly through the opening created by removal or displacement of a portion of the protective housing.
- C. A registrant shall ensure that a laser with viewing ports, viewing optics, or display screens, included as an integral part of the enclosed laser or laser system has:
1. A suitable means to attenuate laser and collateral radiation transmitted through the optical system to less than the accessible emission limit for collateral radiation required by 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments; and
 2. Specific written administrative procedures developed by the LSO, and use controls, such as interlocks or filters, if there is increased hazard to the eye or skin associated with the use of optical systems such as lenses, telescopes, or microscopes.
- D. A registrant shall ensure that each Class 3 or 4 laser product provides a visual or audible indication before the emission of

accessible laser radiation that exceeds the limits for Class 1, as follows:

1. For Class 3, except for laser products that allow access to less than 5 milliwatts peak visible laser radiation, and Class 4 lasers, the indication occurs before the emission of the radiation and allows enough time for action to avoid exposure;
 2. Any visual indicator is clearly visible through protective eyewear designed specifically for the wavelength of the emitted laser radiation;
 3. If the laser and laser energy source are housed separately and can be operated at a separation distance of greater than 2 meters, both the laser and laser energy source incorporate visual or audible indicators; and
 4. Any visual indicators are positioned so that viewing does not require human access to laser radiation that exceeds the applicable MPE.
- E. In addition to the information signs, symbols, and labels prescribed in R12-1-1427, R12-1-1428, and R12-1-1429, each registrant shall provide, near the signs, symbols, and labels within the laser facility, operating procedure restrictions and any other safety information required to ensure compliance with this Article and minimize exposure to laser and collateral radiation.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Table referenced in subsection (A) was repealed effective January 2, 1996; Section amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1423. Laser Prohibitions

- A. A registrant shall not require or permit an individual to look directly into a laser beam or directly at specular reflections of a laser beam, or align a laser by eye while looking along the axis of the laser beam if the intensity of the beam or the beam's reflections exceeds the applicable MPE.
- B. A registrant shall not permit an individual to enter a controlled area if the skin exposure exceeds the applicable MPE, unless the registrant provides and requires the use of protective clothing, gloves, and shields.
- C. A registrant shall ensure that any laser product, emitting spatially scanned laser radiation, does not, as a result of scan failure or any other failure that causes a change in angular velocity or amplitude, permit human access to laser radiation that exceeds the accessible emission limits applicable to that class of product.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1424. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1425. Laser Product Classification

- A. Each laser product is classified on the basis of emission level, emission duration, and wavelength of accessible laser radiation emitted over the full range of resulting operational capability, any time during the useful life of the product, according to the federal performance standards for light-emitting products contained in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration,

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Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

- B. Any person that modifies a certified laser product in a manner that affects any aspect of performance or intended functions of the product, shall recertify and reidentify the product in accordance with 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- C. Any laser system that is incorporated into a laser product that is subject to the requirements of this Article, and capable, without modification, of producing laser radiation when removed from the laser product, is considered a laser product, subject to the applicable requirements of this Article. Upon removal of the laser system described in this subsection, the laser product is classified on the basis of accessible laser radiation emission.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1426. Laser and Collateral Radiation Exposure Limits

- A. A registrant shall not use, or permit the use of a laser product that will result in a human exposure that exceeds the applicable MPE or accessible emission limit (AEL) listed in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. Accessible emission limits are listed in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. These incorporations by reference contain no future editions or amendments.
- B. A registrant shall not allow exposure to collateral radiation that exceeds any accessible emission limit in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1427. Laser Caution Signs, Symbols, and Labels

- A. Except as otherwise authorized by the Agency, a registrant shall use signs, symbols, and labels prescribed by this Section and the design and colors specified in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- B. A registrant shall ensure that the word "invisible" immediately precedes the word "radiation" on labels and signs required by this Section for lasers that only produce wavelengths of laser and collateral radiation that are outside of the range of 400 to 710 nanometers.

- C. A registrant shall ensure that the words "visible and invisible" immediately precede the word "radiation" on labels and signs required by this Section for lasers that produce wavelengths of laser and collateral radiation that are both within and outside the range of 400 to 710 nanometers.
- D. A registrant shall position any label placed on lasers or signs posted in laser facilities so that the reader of the label or sign is not exposed to laser or collateral radiation that exceeds the applicable MPE or accessible emission limit while reading the label or sign.
- E. A registrant shall use labels and signs that are clearly visible, legible, and permanently attached to the laser or facility.
- F. A registrant shall ensure that a permanent and legible label is affixed to each laser, identifying the classification of the laser in accordance with 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- G. For a Class 3 or Class 4 laser a registrant shall ensure that a permanent and legible label is affixed to each laser, specifying the maximum output of laser radiation, the pulse duration if applicable, and the laser medium or emitted wavelength.
- H. For a Class 3 or Class 4 laser, used in the practice of medicine, a registrant shall ensure that a permanent and legible label is affixed to each laser providing one or more of the following warnings near each aperture that emits laser radiation or collateral radiation that exceeds the applicable MPE, as follows:
 1. "AVOID EXPOSURE - Laser radiation is emitted from this aperture" if the radiation emitted through the aperture is laser radiation;
 2. "AVOID EXPOSURE - Hazardous electromagnetic radiation is emitted from this aperture" if the radiation emitted through the aperture is collateral radiation; or
 3. "AVOID EXPOSURE - Hazardous x-rays are emitted from this aperture" if the radiation emitted through the aperture is collateral x-ray radiation.
- I. A registrant shall ensure that there is a label on each non-interlocked or defeatable interlocked portion of the protective housing or enclosure that permits human access to laser or collateral radiation. The label shall include one or more of the following warnings, as applicable:
 1. For laser radiation that exceeds the applicable accessible emission limit for a Class 1 or Class 2 laser, but does not exceed the applicable accessible emission limit for a Class 3 laser, the warning: "DANGER - Laser radiation when open, AVOID DIRECT EXPOSURE TO THE BEAM."
 2. For laser radiation that exceeds the applicable accessible emission limit for a Class 3 laser, the warning: "DANGER - Laser radiation when open, AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION."
 3. For collateral radiation that exceeds an applicable accessible emission limit:
 - a. If the applicable limit for collateral laser radiation is exceeded, the warning: "CAUTION - Hazardous electromagnetic radiation when open"; and
 - b. If the applicable limit for collateral x-ray radiation is exceeded, the warning: "CAUTION - Hazardous x-ray radiation".
 4. For a protective housing or an enclosure that has a defeatable interlock, the warning "and interlock defeated" in addition to the warnings in subsections (1) through (3).

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Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1428. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1429. Posting of Laser Facilities

Unless other methods are approved by the Agency, a registrant shall post each laser facility in accordance with ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1430. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1431. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1432. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1433. Laser Use Areas that are Controlled

- A. A registrant shall establish a controlled area for a laser if it is possible for a person to be exposed to laser radiation from a Class 3b laser, except a Class 3b laser of less than 5 milliwatts visible peak power, or a Class 4 laser that exceeds the applicable MPE or AEL in R12-1-1426.
- B. A registrant shall ensure that a controlled area associated with a Class 3b laser is:
 1. The responsibility of a LSO;
 2. Posted in accordance with this Article; and
 3. Access controlled by the LSO or a trained, designated representative.
- C. A registrant shall ensure that a controlled area associated with a Class 4 laser is:
 1. The responsibility of a LSO;
 2. Posted in accordance with this Article;
 3. Access controlled by the LSO or a trained, designated representative; and
 4. If an indoor controlled area:
 - a. Equipped with latches, interlocks, or another means of preventing unexpected entry into the controlled area;
 - b. Equipped with a control-disconnect switch, panic button, or an equivalent device for deactivating the laser during an emergency;
 - c. Operated so that the person in charge of the controlled area can momentarily override the safety

interlocks during tests that require continuous operation to provide access to other personnel if there is no optical radiation hazard at the point of entry and the entering personnel are wearing required protective devices; and

- d. Controlled in a way that reduces the transmitted values of laser radiation through optical paths such as windows, to levels at or below the applicable ocular MPE and AEL in R12-1-1426. If a laser beam with an irradiance or radiant-exposure above the applicable MPE or AEL will exit the indoor controlled area (as in the case of exterior atmospheric beam paths), the registrant and the operator are responsible for ensuring that the beam path is limited to controlled air space or controlled ground space.

- D. If a panel or protective cover is removed or an interlock bypassed for service, testing, or maintenance, a registrant shall establish an accessible controlled area. The registrant, through a LSO or a designated representative, shall comply with laser safety requirements for all potentially-exposed individuals.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1434. Laser Safety Officer (LSO)

- A. Each registrant shall designate a Laser Safety Officer (LSO).
- B. The LSO shall administer the laser radiation protection program and shall:
 1. Ensure that maintenance or service for Class 3b and Class 4 lasers is performed only by technicians trained to provide the maintenance or service by either the manufacturer's service organization or the registrant;
 2. Approve or reject written service, maintenance, and operating procedures;
 3. Investigate, document, and report all incidents as required by R12-1-1436;
 4. Select protective eyewear as required by R12-1-1435, along with any other protective equipment;
 5. For health care facilities, establish authorization and operating procedures, including preoperative and postoperative checklists, for use by operating room personnel;
 6. Ensure that authorized personnel are trained in the assessment and control of laser hazards;
 7. Select signs, symbols, and labels as required by R12-1-1427;
 8. Perform laser radiation protection surveys as required by R12-1-1421 and R12-1-1441;
 9. Classify or verify the classification of lasers and laser systems used under the LSO's jurisdiction;
 10. Evaluate the hazard of laser use areas, treatment areas, and controlled areas, as required by R12-1-1421(C).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1435. Laser Protective Eyewear

- A. A registrant shall require that protective eyewear, as specified by the LSO, be worn by an individual who has access to:
 1. Class 4 laser radiation; or
 2. Class 3b laser radiation.
- B. A registrant shall, through the LSO, provide protective eyewear that is:

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1. Marked with a label that indicates the optical density protection afforded for the relevant laser wavelength;
 2. Maintained so that the protective properties of the eyewear are preserved;
 3. Inspected at intervals that do not exceed six months to ensure integrity of the protective properties; and
 4. Removed from service if the protective properties of the eyewear fall below the optical density on the label.
- C. A registrant shall maintain records of protective eyewear maintenance, inspection, and removal from service for five years.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1436. Reporting Laser Incidents

- A. A registrant shall notify the Agency by telephone within 24 hours of any incident that has caused or may have caused:
1. Permanent loss of sight in either eye; or
 2. Third-degree burns of the skin involving more than 5 percent of the body surface as estimated by the rule of nines.
- B. A registrant shall notify the Agency by telephone within five working days of any incident that has or may have caused:
1. Any second-degree burn of the skin larger than one inch (2.54 centimeter) in greatest diameter; or
 2. Any third-degree burn of the skin; or
 3. An eye injury with any potential loss of sight.
- C. Each registrant shall file a written report with the Agency of any known exposure of an individual to laser radiation or collateral radiation within 30 days of its discovery, describing:
1. Each exposure of the individual to laser or collateral radiation that exceeds the applicable MPE; and
 2. Any incident that triggered a notice requirement in subsections (A) or (B).
- D. Each report required by subsection (C) shall describe the extent of exposure to each individual including:
1. An estimate of the individual's exposure;
 2. The level of laser or collateral radiation involved;
 3. The cause of the exposure; and
 4. The corrective steps taken or planned to prevent a recurrence.
- E. A registrant shall not operate or permit the operation of any laser product or system that does not meet the applicable requirements in this Article.

Editor's Note: The tables referenced in subsection (A) were repealed effective January 2, 1996.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1); the tables previously referenced in subsection (A) were repealed effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1437. Special Lasers

A registrant operating a laser system with an unenclosed beam path shall:

1. Conduct an evaluation before operating the laser to determine the expected beam path and the potential hazards from reflective surfaces. Based on the evaluation the registrant shall exclude reflective surfaces from the beam path at all points where the laser radiation exceeds an applicable MPE;

2. Evaluate the stability of the laser platform to determine the constraints placed upon the beam traverse and the extent of the range of control; and
3. Refrain from operating or making a laser ready for operation until the area along all points of the beam path, where the laser radiation will exceed the applicable MPE, is clear of individuals, unless the individuals are wearing the correct protective devices.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1438. Hair Reduction and Other Cosmetic Procedures Using Laser and Intense Pulsed Light

- A. Registration. A person who seeks to perform hair reduction or other cosmetic procedures shall apply for registration of any medical laser or IPL device that is a Class II surgical device, certified as complying with the labeling standards in 21 CFR 801.109, revised April 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The applicant shall provide all of the following information to the Agency with the application for registration:
1. Documentation demonstrating that the health professional is qualified in accordance with A.R.S. § 32-516 or 32-3233, has 24 hours of didactic training on the subjects listed in Appendix C, and has passed an Agency-approved exam on subjects covered with a minimum grade of 80%;
 2. For any health professional in practice prior to October 1, 2010, proof of 24 hours of training on the subjects listed in Appendix C;
 3. Documentation endorsed by the prescribing health professional, acknowledging responsibility for the minimum level of supervision required for hair reduction procedures as defined in R12-1-1402 under "indirect supervision";
 4. Procedures to ensure that the registrant has a written order from a prescribing health professional before the application of radiation;
 5. If authorized, procedures to ensure that, in the absence of a prescribing health professional at the facility, the registrant has established a method for emergency medical care and assumed legal liability for the service rendered by an indirectly-supervised certified laser technician; and
 6. Documentation that the indirectly-supervised certified laser technician has participated in the supervised training required by A.R.S. § 32-516 or 32-3233.
- B. Hair Reduction Procedures
1. If a registrant is using a medical laser or an IPL device that is a Class II surgical device, certified in accordance with the labeling standards in subsection (A), for hair reduction procedures, the registrant shall:
 - a. Ensure that the device is only used by a health professional described in A.R.S. §§ 32-516(F)(3) and 32-3233(D)(1) or by a certified laser technician who is working under the indirect supervision of a health professional described in A.R.S. §§ 32-516(C)(1) and 32-3233(D) and (H)(1), and
 - b. Ensure that a prescribing health professional purchases or orders the Class II surgical device that will be used for hair reduction procedures.
 2. A registrant shall:

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- a. Not permit an individual to use a medical laser or IPL device for hair reduction procedures unless the individual:
 - i. Completes an approved laser technician didactic training program of at least 40 hours duration. To successfully complete the training program, the individual shall pass a test that consists of at least 50 multiple choice questions on subjects covered with a minimum grade of 80%. The training program shall be provided by an individual who is a health professional acting within the health professional's scope of practice, or a certified laser technician with a minimum of 100 hours of hands-on experience per procedure being taught;
 - ii. Is present in the room for at least 24 hours of hands-on training, conducted by a health professional or a certified laser technician as described in subsection (B)(2)(a)(i);
 - iii. Performs or assists in at least 10 hair reduction procedures; and
 - iv. Has the qualified health professional or qualified supervising certified laser technician certify that the laser technician has completed the training and supervision as described in subsection (B)(2)(a).
 - b. Ensure that the laser technician follows written procedure protocols established by a prescribing health professional; and
 - c. Ensure that the laser technician follows any written order, issued by a prescribing health professional, which describes the specific site of hair reduction.
3. A registrant shall maintain a record of each hair reduction procedure protocol that is approved and signed by a prescribing health professional, and ensure that each protocol is reviewed by a prescribing health professional, at least annually.
 4. A registrant shall:
 - a. Maintain each procedure protocol onsite, and ensure that the protocol contains instructions for the patient concerning follow-up monitoring; and
 - b. Design each protocol to promote the exercise of professional judgment by the laser technician commensurate with the individual's education, experience, and training. The protocol need not describe the exact steps that a qualified laser technician should take with respect to a hair reduction procedure.
 5. A registrant shall require that a prescribing health professional observe the performance of each laser technician during procedures at intervals that do not exceed six months. The registrant shall maintain a record of the observation for three years from the date of the observation.
 6. A registrant shall verify that a health professional is qualified to perform hair reduction procedures by obtaining evidence that the health professional has received relevant training specified in subsection (A)(1) and in physics, safety, surgical techniques, pre-operative and post-operative care and can perform these procedures within the relevant scope of practice, as defined by the health professional's licensing board.
 7. A registrant shall provide radiation safety training to all personnel involved with hair reduction procedures, designing each training program so that it matches an individual's involvement in hair reduction procedures. The registrant shall maintain records of the training program and make them available to the Agency for three years from the date of the program, during and after the individual's period of employment.
- C. Other Cosmetic Procedures
1. If a registrant is using a medical laser or an IPL device that is a Class II surgical device, certified in accordance with the labeling standards in subsection (A), for other cosmetic procedures, the registrant shall:
 - a. Ensure that the device is only used by a health professional described in A.R.S. §§ 32-516(F)(3) and 32-3233(D)(1) or by a certified laser technician who is directly supervised by a health professional as described in A.R.S. §§ 32-516(C)(2) and 32-3233(D) and (H)(2); and
 - b. Ensure that a prescribing health professional purchases or orders the Class II surgical device that will be used for other cosmetic procedures.
 2. A registrant shall not permit an individual to use a medical laser or IPL device for other cosmetic procedures unless the individual:
 - a. Completes an approved laser technician didactic training program of at least 40 hours duration. To successfully complete the training program the individual shall pass a test that consists of at least 50 multiple choice questions on subjects covered with a minimum grade of 80%. The training program shall be provided by an individual who is a health professional acting within the health professional's scope of practice, or a certified laser technician with a minimum of 100 hours of hands-on experience per procedure being taught;
 - b. Is present in the room for at least 24 hours of hands-on training, conducted by a health professional or a certified laser technician as described in subsection (C)(2)(a); and
 - c. Performs or assists in at least 10 cosmetic procedures governed by subsection (C), for each type of procedure (for example: spider vein reduction, skin rejuvenation, non-ablative skin resurfacing); and
 - d. Has the qualified health professional or qualified supervising certified laser technician certify that the laser technician has completed the training and supervision as described in subsection (C)(2).
 3. A registrant shall maintain a record of each protocol for a cosmetic procedure governed by subsection (C) that is approved and signed by a prescribing health professional, and ensure that each protocol is reviewed by a prescribing health professional, at least annually. The registrant shall:
 - a. Maintain each protocol onsite, and ensure that the protocol contains instructions for the patient concerning follow-up monitoring; and
 - b. Design each protocol to promote the exercise of professional judgment by the laser technician commensurate with the individual's education, experience, and training. The protocol need not describe the exact steps that a qualified laser technician should take with respect to a cosmetic procedure governed by subsection (C).
 4. A registrant shall verify that a health professional is qualified to perform laser, IPL, and related procedures, by obtaining evidence that the health professional has received relevant training specified in subsection (A)(1) and in physics, safety, surgical techniques, pre-operative and post-operative care and can perform these procedures within the relevant scope of practice, as defined by the health professional's licensing board.

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5. A registrant shall provide radiation safety training to all personnel involved with cosmetic procedures governed by subsection (C), designing each training program so that it matches an individual's involvement in each procedure. The registrant shall maintain records of the training program and make them available to the Agency for three years from the date of the program, during and after the individual's period of employment.
- D. Persons governed by this Section shall also comply with other applicable licensing and safety laws.
- E. A laser shall be secured so that the laser cannot be removed from the facility and the on/off switch is turned to the "off" position with the key removed when a certified laser technician or a health professional is not present in the room where the laser is located.
9. Acquired Adult Hemangioma Reduction,
10. Facial Erythema Reduction,
11. Solar Lentigo Reduction (Age Spots),
12. Ephelis Reduction (Freckles),
13. Acne Scar Reduction,
14. Photo Facial, or
15. Additional procedures as approved by the Agency after consultation with other health professional boards as defined in A.R.S. §§ 32-516(F)(3) or 32-3233(D)(1).
- G. For any application relating to the certification of laser technicians, as described in A.R.S. § 41-1072, there is an administrative completeness review time-frame of 30 days and a substantive review time-frame of 30 days with an overall time-frame of 60 days.
- H. Certified laser technicians shall display a valid original certificate as issued by the Agency in a location that is viewable by the public.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1). Amended by final rulemaking at 16 A.A.R. 1703, effective August 10, 2010; Manifest typographical errors corrected at the request of the Agency, filed August 31, 2010, file no. M10-342 (Supp. 10-3).

R12-1-1438.01. Certification and Revocation of Laser Technician Certificate

- A. An applicant for a laser technician certificate shall submit a completed application and certification that the applicant has received the training specified in A.R.S. §§ 32-516(A) or 32-3233(E).
- B. The applicant shall pay a nonrefundable fee of \$30.00. A duplicate certificate may be requested at the time of initial application or renewal at a fee of \$10.00 per certificate. To obtain a duplicate certificate at other times a laser technician shall pay \$20.00 per certificate.
- C. Initial certificates are issued for 12 months and expire on the last day of the month. A renewal application shall be accompanied by a renewal fee of \$30.00 each year in addition to \$10.00 per duplicate certificate requested.
- D. Under A.R.S. § 32-3233(I) and (J), the Agency may take appropriate disciplinary action, including revocation of the certificate of a certified laser technician. The Agency may discipline a certified laser technician who has had a relevant professional license suspended or revoked, or been otherwise disciplined by a health professional board or the Board of Cosmetology. The Agency may also discipline the certified laser technician for falsifying documentation related to training, prescriptions, or other required documentation. As provided in Article 12 of this Chapter, the Agency may assess civil penalties, suspend, revoke, deny, or put on probation a certified laser technician.
- E. A laser technician who has been using laser and IPL devices prior to November 24, 2009 may continue to do so if the technician applies for and receives a certificate from the Agency before October 1, 2010.
- F. Certification may be issued for one or more of the following procedures:
 1. Hair Reduction,
 2. Skin Rejuvenation,
 3. Non-Ablative Skin Resurfacing,
 4. Spider Vein Reduction,
 5. Skin Tightening,
 6. Wrinkle Reduction,
 7. Laser Peel,
 8. Telangiectasia Reduction,

Historical Note

New Section made by final rulemaking at 16 A.A.R. 1703, effective August 10, 2010 (Supp. 10-3).

R12-1-1439. Laser and IPL Laser Technician and Laser Safety Training Programs

- A. A person seeking to initiate a medical laser or IPL laser technician training program shall submit an application to the Agency for certification that contains a description of the training program. In addition, the person shall submit a syllabus and a test that consists of at least 50 multiple choice questions on subjects covered. In the program materials, the person shall address the subjects in R12-1-1438 through this Section, and Appendix C.
- B. The Agency shall review the application and other documents required by subsections (A) and (E) in a timely manner, using an administrative completeness review time-frame of 40 days and a substantive review time-frame of 20 days with an overall time-frame of 60 days.
- C. The Agency shall maintain a list of certified laser or IPL training programs.
- D. Applicants for approval as a certified laser or IPL training program shall pay a nonrefundable \$100.00 fee.
- E. Initial certification shall be issued for 12 months and shall expire on the last day of the month. A renewal application shall be accompanied by a renewal fee of \$100.00 each year.
- F. A person seeking to initiate a medical laser or IPL laser technician safety training program shall submit an application to the Agency for certification that contains a description of the training program. In addition, the person shall submit a syllabus and a test that consists of at least 50 multiple choice questions on subjects covered. In the program materials, the person shall address the subjects in R12-1-1421 through R12-1-1444, Appendix C, and Appendix D, with emphasis on personal and public safety. The program shall also contain the training required by A.R.S. § 32-3233(E) or clearly state the portions of the training that are not provided or met if didactic certification is to take place in another program. The applicant shall conduct training in accordance with the program submitted to the Agency and certified by the Agency.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1). Amended by final rulemaking at 16 A.A.R. 1703, effective August 10, 2010 (Supp. 10-3).

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R12-1-1440. Medical Lasers

- A.** A registrant shall ensure that a Class 3 and Class 4 laser product used in the practice of medicine has a means for measuring the level of laser radiation with an error in measurement of no greater than +20%, when calibrated in accordance with the laser product manufacturer's calibration procedure.
- B.** A registrant shall calibrate a laser used in the practice of medicine according to the manufacturer's specified calibration procedure, at intervals that do not exceed those specified by the manufacturer.
- C.** In a medical facility where several medical disciplines or a number of different practitioners use Class 3b and Class 4 lasers, a registrant shall form a Laser Safety Committee to govern laser activity, establish use criteria, and approve operating procedures, as follows:
1. With regard to membership of the committee the registrant shall include at least one representative of the Nursing staff, the LSO, one management representative, and one representative of each medical discipline that uses the lasers;
 2. The committee shall review actions by the LSO related to hazard evaluation and the monitoring and control of laser hazards; and
 3. The committee shall approve or deny requests by potential operators and ancillary personnel to operate or assist in the operation of a laser under the direction of a licensed practitioner.
- D.** A registrant shall use Class 3b and Class 4 Lasers that have a guard mechanism on the switch to control patient exposure and prevent inadvertent exposure.
- E.** A registrant shall establish a written laser safety training program that provides a thorough understanding of established procedures for each type of laser in use and the medical procedures associated with use of the laser. The registrant shall make program documentation available for Agency review and, at minimum, address all of the following in the documentation:
1. Regulatory requirements and the laser classification system;
 2. Fundamentals of laser operation and the significance of specular and diffuse reflections;
 3. Biological effects of laser radiation on the eye and skin;
 4. Non-beam hazards (for example: electrical, chemical, and reaction by-product hazards) and ionizing radiation hazards (for example: x-rays from power sources and target interactions, if applicable) of lasers; and
 5. Responsibilities of management and employees regarding control measures.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1441. Laser Light Shows and Demonstrations

- A.** Before a conducting laser light show or laser demonstration, a registrant shall provide documentation to the Agency that a variance from 21 CFR 1040.10 has been obtained from the FDA.
- B.** A registrant shall notify the Agency in writing, at least three working days in before a proposed laser light show or demonstration, and include all of the following information:
1. The location, time, and date of the light show or demonstration;
 2. Sketches showing the locations of each laser, operator, performer, laser beam path, viewing screen, wall, mirror

- ball, or any other reflective or diffuse surface that could be hit by or reflect the laser beam;
 3. Scanning beam patterns, scan velocity, and frequency in occupied areas; and
 4. Physical surveys and calculations made to comply with this Article.
- C.** A registrant shall supply any additional information required by the Agency for the safety evaluation of the proposed activity.
- D.** Before an outdoor laser light show, a registrant shall notify the Federal Aviation Administration of the proposed show.
- E.** If a light show or demonstration involves laser radiation emissions outside the spectral range of 400 to 700 nanometers, a registrant shall prevent the emissions from exceeding the applicable Class 1 accessible emission limit.
- F.** If it is likely that an audience member or any operator, performer, or employee will view laser or collateral radiation, a registrant shall prevent the radiation from exceeding the applicable Class 1 accessible emission limit.
- G.** Even if it is unlikely that an individual, including any operator, performer, or employee in the vicinity of a laser light show or demonstration will view or be exposed to laser or collateral radiation, a registrant shall prevent the radiation from exceeding the applicable Class 2 accessible emission limit.
- H.** A registrant shall identify any area where levels of laser radiation exceed the applicable Class 2 accessible emission limit by posting warning signs and using barriers or guards to prevent entry.
- I.** If a registrant uses a scanning device, the registrant shall not use a device which, as a result of scan failure or any other failure, can change its angular velocity or amplitude, permitting audience exposure to laser radiation that exceeds the applicable Class 1 accessible emission limit.
- J.** If a mirror ball is used with a scanning laser, a registrant shall meet the requirements of subsections (F) and (G) when the mirror ball is stationary or during any failure mode that results in a change in the rotational speed of the mirror ball.
- K.** A registrant shall ensure that an operator is at all times directly and personally supervising a laser light show or demonstration, except in cases where the maximum laser power output level is less than 5 milliwatts (all spectral lines) and the laser beam path is located at all times at least 6 meters above any surface upon which an individual in the audience is permitted to stand, and at any point, more than 2.5 meters in lateral separation from any position where an individual in the audience is permitted during the performance.
- L.** A registrant shall prevent laser radiation levels from exceeding the applicable Class 2 accessible emission limit at any point less than three meters above any surface upon which an individual in the audience is permitted to stand and 2.5 meters in lateral separation from any position where an individual in the audience is permitted, unless physical barriers are present that prevent human access to the radiation.
- M.** A registrant shall limit the maximum power output of any laser to a level sufficient to produce the desired effect.
- N.** If a registrant is required to limit output power to a level less than the available power to meet the requirements of this Article, the registrant shall adjust, measure, and record the laser output power before the laser light show or demonstration.
- O.** A registrant shall functionally test and evaluate all safety devices and procedures necessary to comply with this Article after setup, and before a laser light show or demonstration.
- P.** A registrant shall secure a laser system, when not in use, against unauthorized operation or tampering
- Q.** A registrant shall perform laser alignment procedures with the laser output power reduced to the lowest practicable level, and

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ensure that any operator, performer, or other employee wears protective eyewear as necessary to prevent exposure to radiation levels that exceed the applicable MPE. The registrant shall only allow individuals who are performing the alignment be present during alignment procedures.

- R.** A registrant shall not conduct a laser light show or demonstration unless the Agency has specifically exempted the show or demonstration from the requirements of 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1442. Measurements and Calculations to Determine MPE Limits for Lasers

A registrant shall take measurements to determine MPE values in a manner consistent with the procedures contained in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). New Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1443. Laser Compliance Measurement Instruments

A registrant shall ensure that the radiation output measurement is performed with an instrument that is calibrated and designed for use with the laser that is being evaluated for compliance. The registrant shall specify the date of calibration, accuracy of calibration, wavelength range, and power or energy of calibration on a legible, clearly visible label attached to the instrument.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1444. Laser Classification Measurements

- A.** A registrant shall measure accessible emission for classification:
1. Under the operational conditions and procedures that maximize accessible emission levels, including start-up, stabilized operation, and shutdown of the laser or laser facility;
 2. With all controls and adjustments listed in the operating and service instructions adjusted for the maximum accessible emission level of laser radiation that is not expected to be detrimental to the functional integrity of the laser or enclosure;
 3. At points in space to which human access is possible for a given laser configuration. If operations include the defeat of safety interlocks or removal of portions of the protective housing or enclosure, the registrant shall measure accessible emission at points accessible in that configuration;

4. With the measuring instrument detector positioned so that the maximum possible radiation is measured by the instrument; and
5. With the laser coupled to the type of laser energy source specified as compatible by the laser manufacturer and producing the maximum emission of accessible laser radiation.

- B.** A registrant shall perform measurements of accessible emission levels, used to classify laser and collateral radiation in accordance with 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix A. Radio Frequency Devices (Include, but are not limited to, the following)

Dielectric heaters and sealers
 Medical diathermy units
 Radar
 R.F. activated alarm systems
 Sputter devices
 R.F. activated lasers
 Edge gluers
 Industrial microwave ovens and dryers
 Asher-etcher equipment
 R.F. welding equipment
 Medical surgical coagulators

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix B. Application Information

The Agency shall issue a registration if an applicant provides the following information and fee as required in R12-1-1401(D). The Agency shall provide an application form to the applicant with a guide and upon request, assist the applicant to ensure that correct information is provided on the application form.

Name and mailing address of applicant
 Person responsible for radiation safety program
 Type of facility
 Legal structure and ownership
 Radiation source information
 Shielding information
 Equipment operator instructions and restrictions
 Classification of professional in charge
 Type of request: amendment, new, or renewal
 Protection survey results, if applicable
 Radiation Safety Officer name, if applicable
 Laser class and type, if applicable
 Information required by Article 14 for the specific source
 Use location
 Telephone number
 Facility subtype
 Signature of certifying agent
 Equipment identifiers
 Scale drawing
 Physicist name and training, if applicable
 Contact person

Applicable fee listed in Article 13 schedule

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). Appendix repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). New appendix made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix C. Hair Removal and Other Cosmetic Laser or IPL Operator Training Program

1. General Considerations. An applicant shall ensure that:
 - a. The training program is specific to the medical laser or IPL device in use and the clinical procedures to be performed;
 - b. Program content is consistent with facility policy and procedure and applicable federal and state law; and
 - c. The training program addresses hazards associated with laser or IPL device use.
2. Technical Considerations. The applicant's training program shall cover all of the following technical subjects:
 - a. Laser and IPL device descriptions
 - b. Definitions
 - c. Laser and IPL device radiation fundamentals
 - d. Laser mediums, types of lasers, and other light-emitting devices – solid, liquid, gas, and IPL devices
 - e. Biological effects of laser or IPL device light
 - f. Damage mechanisms
 - i. Eye hazard
 - ii. Skin hazard (includes information regarding skin type and skin anatomy)
 - iii. Absorption and wavelength effects
 - iv. Thermal effects
 - g. Photo chemistry
 - h. Criteria for setting the Maximum Permissible Exposure (MPE) for eye and skin associated hazards
 - i. Explosive, electrical, and chemical hazards
 - j. Photosensitive medications
 - k. Fire, ionizing radiation, cryogenic hazards, and other hazards, as applicable
3. Medical Considerations. The applicant's training program shall cover all of the following medical subjects:
 - a. Local anesthesia techniques, including ice, EMLA® cream, and other applicable topical treatments
 - b. Typical laser and IPL device settings for hair removal and cosmetic procedures
 - c. Expected patient response to treatment
 - d. Potential adverse reactions to treatment
 - e. Anatomy and physiology of skin areas to be treated
 - f. Indications and contraindications for use of pigment and vascular-specific lasers for cutaneous procedures
4. General Laser or IPL device safety. The applicant's training program shall cover the following general safety subjects:
 - a. Laser and IPL device classifications
 - b. Control measures (includes information regarding protective equipment)
 - c. Manager and operator responsibilities
 - d. Medical surveillance practices
 - e. Federal and state legal requirements
 - f. Related safety issues

- i. Controlled access
- ii. Plume management
- iii. Equipment testing, aligning, and troubleshooting

Historical Note

New appendix made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

Appendix D. Laser Operator and Laser Safety Officer Training

1. Operators and personnel that work around lasers:
 - a. Fundamentals of laser operation (for example: physical principles, construction, and other basic information)
 - b. Bioeffects of laser radiation on the eye and skin
 - c. Significance of specular and diffuse reflections
 - d. Non-beam hazards of lasers (for example: electrical, chemical, and reaction byproducts)
 - e. Ionizing radiation hazards (includes information regarding x-rays from power sources and target interactions, if applicable)
 - f. Laser and laser system classifications
 - g. Control measures
 - h. Responsibilities of managers and operators
 - i. Medical surveillance practices (if applicable)
 - j. CPR for personnel servicing lasers with exposed high voltages, the capability of producing potentially lethal electrical currents, or both.
2. The LSO or other individual responsible for the safety program, evaluation of hazards, and implementation of control measures, or any others, if directed by management to obtain a thorough knowledge of laser safety:
 - a. The subjects covered in subsection (1)
 - b. Laser terminology
 - c. Laser types, wavelengths, pulse shapes, modes, power and energy
 - d. Basic radiometric units and measurement devices
 - e. MPE levels for eye and skin under all conditions
 - f. Laser hazard evaluations, range equations, and other calculations
3. Technical Considerations
 - a. Laser and IPL device descriptions
 - b. Definitions
 - c. Laser and IPL device radiation fundamentals
 - d. Laser mediums, types of lasers, and other light-emitting devices (includes information regarding diodes and solid, liquid, gas, and IPL devices)
 - e. Biological effects of laser or IPL device light
 - f. Damage mechanisms
 - i. Eye hazard
 - ii. Skin hazard (includes information regarding skin type and skin anatomy)
 - iii. Absorption and wavelength effects
 - iv. Thermal effects
 - g. Photo chemistry
 - h. Photosensitive medications
 - i. Criteria for setting the Maximum Permissible Exposure (MPE) levels for eye and skin associated hazards
 - j. Explosive, electrical, and chemical hazards
 - k. Fire, ionizing radiation, cryogenic hazards, and other hazards as applicable

Historical Note

New appendix made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

ARTICLE 15. TRANSPORTATION**R12-1-1501. Requirement for License**

- A.** A person shall not transport radioactive material or deliver radioactive material to a carrier for transport unless the person is authorized in a general or specific license issued by the Agency or exempt under R12-1-103(A).
- B.** This Article applies to any licensee to transfer licensed material if the licensee delivers that material to a carrier for transport, transports the material outside the site of usage as specified in the license, or transports that material on public highways. No provision of this Article authorizes possession of licensed material.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-1502. Definitions

Terms defined in Article 1 have the same meaning when used in this Article.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1503. Transportation of Licensed Material

Each licensee that transports licensed material outside the site of usage, as specified in an Agency license, or where transport is on public highways, or that delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the U.S. Department of Transportation regulations listed in 10 CFR 71.5, revised January 1, 2008, incorporated by reference and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Repealed effective June 13, 1997 (Supp. 97-2). New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1504. Intrastate Transportation and Storage of Radioactive Materials

- A.** A general license is issued to:
1. Any common or contract carrier not exempt under R12-1-103 to receive, possess, transport, and store radioactive material in the regular course of carriage for others or to store radioactive material incident to the transport activities, provided the transportation or storage is in accordance with applicable requirements for the mode of transport of the U.S. Department of Transportation, 49 CFR 171 through 180, revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 2. Any private carrier or licensee who transports and stores radioactive material, provided the transportation and storage are in accordance with the requirements applicable to the mode of transport, of the U.S. Department of Transportation,

49 CFR 171 through 180, revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

- B.** Any notification of incidents required under federal regulations in subsection (A) shall also be filed with, or made to, the Agency.
- C.** A person who transports or stores radioactive material according to the general license in this Section is exempt from the requirements of Article 4 and Article 10 of this Chapter to the extent that this Section applies to transportation of the radioactive material.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1505. Storage of Radioactive Material in Transport

- A.** A carrier shall not store, for any period in excess of 72 hours, any package that contains radioactive material bearing a Department of Transportation Yellow II or Yellow III label, unless the radioactive material is stored in an area other than, and not adjacent to, any food storage area or area that is normally occupied by an individual.
- B.** A carrier shall not store a package that contains radioactive material with other hazardous materials, except as authorized by U.S. Department of Transportation regulations in 49 CFR 177.848, revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** Whenever a package containing radioactive material is stored in excess of 48 hours, the storage area shall be conspicuously posted according to the requirements of Article 4.
- D.** When transit is interrupted and storage is required for an extended period, the following requirements apply:
1. When radioactive materials are stored for longer than 48 hours during transit, the carrier shall notify the local fire department and provide the following information:
 - a. Warehouse location and carrier name and telephone number;
 - b. Radionuclide(s);
 - c. Activity per package in curies or becquerels and number of packages;
 - d. Form (solid, metallic, liquid, gas);
 - e. Flammability (if flammable);
 - f. Specific location in warehouse;
 - g. Estimated date of departure;
 - h. Toxicity (if toxic).
 2. If the radioactive material will be, or has been in storage for longer than 90 days, the carrier shall notify the Agency in writing and include the information required in subsection (D)(1).
 3. The licensee or carrier shall immediately notify the Department of Public Safety of an accident involving radioactive material.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-1506. Preparation of Radioactive Material for Transport

A licensee shall not deliver any package that contains radioactive material to a carrier for transport or transport radioactive material, unless the licensee:

1. Complies with the U.S. Department of Transportation packaging, monitoring, manifesting, marking, and labeling regulations applicable to the mode of transport, (Contained in 49 CFR 171 through 180, revised October 1, 2007, or 39 CFR 111.1, revised July 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
2. Establishes procedures for safely opening and closing packages in which radioactive material is transported; and
3. Prior to delivery of a package to a carrier for transport, assures that:
 - a. The package is properly closed, and
 - b. Any special instructions needed to safely open the package are made available to the consignee.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1507. Packaging Quality Assurance

- A. A licensee that transports radioactive material in the course of business or delivers radioactive material to a carrier for transport in a package for which a license, certificate of compliance, or other approval has been issued by the Nuclear Regulatory Commission, or meets the applicable criteria (10 CFR 71, Subpart H, revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), shall establish, maintain, and execute the quality assurance program specified in 10 CFR 71, Subpart H.
- B. In addition to the requirements in subsection (A) for a quality assurance program, a licensee shall verify by procedures such as checking or inspection, that deficiencies or defective material or equipment relative to the shipment of packages containing radioactive material are promptly identified and corrected.
- C. Before the first use of any Type B packaging, a licensee shall obtain approval of its quality assurance program by the Agency.
- D. A licensee shall maintain sufficient written records to demonstrate compliance with the quality assurance program. Records of quality assurance pertaining to the use of a Type B package for shipment of radioactive material shall be maintained for three years after the package is used for a shipment.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1508. Advance Notification of Nuclear Waste Transportation

- A. Prior to the transport of any nuclear waste, as defined in Article 1, outside of the confines of the licensee's facility or other place of use or storage, or prior to the delivery of any nuclear

waste to a carrier for transport, each licensee shall provide advance notification of such transport to the Agency.

- B. Each advance notification required in subsection (A) above shall contain the following information:
 1. The name, address, and telephone number of the shipper, carrier, and receiver of the shipment;
 2. A description of the nuclear waste contained in the shipment as required by 49 CFR 172.202 and 172.203(d) (Revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 3. The point of origin of the shipment and the seven-day period during which departure of the shipment will occur;
 4. The seven-day period during which arrival of the shipment at state boundaries will occur;
 5. The destination of the shipment, and the seven-day period during which arrival of the shipment will occur; and
 6. A point of contact with a telephone number for current shipment information.
- C. The licensee shall make the notification required by subsection (A) in writing to the Agency. A notification delivered by mail must be postmarked at least seven days before the beginning of the seven-day period during which departure of the shipment is estimated to occur. The licensee shall maintain a copy of the notification for one year.
- D. The licensee shall notify the Agency of any changes in shipment plans, including cancellations, rerouting, or rescheduling, provided pursuant to subsection (A). Such notification shall be by telephoning the Agency. The licensee shall maintain for one year a record of the name of the individual contacted.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1509. General License: Plutonium-Beryllium Special Form Material

- A. A general license is issued to any licensee of the Agency to transport fissile material in the form of plutonium-beryllium (Pu-Be) special form sealed sources, or to deliver Pu-Be sealed sources to a carrier for transport, if the material is shipped in accordance with this Article. This material must be contained in a Type A package. The Type A package must also meet the DOT requirements of 49 CFR 173.417(a), revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- B. The general license applies only to a licensee who has a quality assurance program approved by the Agency as satisfying the provisions of R12-1-1507.
- C. The general license applies only when a package's contents:
 1. Contain no more than a Type A quantity of radioactive material; and
 2. Contain less than 1000 g of plutonium, provided that: plutonium-239, plutonium-241, or any combination of these radionuclides, constitutes less than 240 g of the total quantity of plutonium in the package.
- D. The general license applies only to packages labeled with a CSI which:
 1. Has been determined in accordance with subsection (E);
 2. Has a value less than or equal to 100; and
 3. For a shipment of multiple packages containing Pu-Be sealed sources, the sum of the CSIs must be less than or

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equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).

- E. The value for the CSI must be greater than or equal to the number calculated by the following equation:
1. $CSI = 10[(\text{grams of } ^{239}\text{Pu} + \text{grams of } ^{241}\text{Pu})/24]$,
 2. The calculated CSI must be rounded up to the first decimal place.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-1510. Packaging

- A. A general license is issued to any licensee to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance, or other approval has been issued by the NRC.
1. This general license applies only to a licensee that has a quality assurance program approved by the Agency as satisfying R12-1-1507;
 2. This general license applies only to a licensee that:
 - a. Has a copy of the license, certificate of compliance, or other approval of the package, and has the drawings and other documents referenced in the approval relating to the use and maintenance of the packaging and to the actions to be taken before shipment;
 - b. Complies with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of this Article; and
 - c. Before the licensee's first use of the package, submits in writing to the Agency the licensee's name, license number, and the package identification number specified in the package approval.
 3. This general license applies only when the package approval authorizes use of the package under this general license.
 4. For a Type B or fissile material package, the design of which was approved by NRC before April 1, 1996, the general license is subject to the additional restrictions of subsection (B).
- B. Type B packages.
1. A Type B package previously approved by NRC but not designated as B(U) or B(M) in the identification number of the NRC Certificate of Compliance, may be used under the general license of subsection (A) with the following additional conditions:
 - a. Fabrication of the packaging is satisfactorily completed by August 31, 1986, as demonstrated by application of its model number in accordance with 10 CFR 71.85(c) (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - b. A package that is used for a shipment to a location outside the United States is subject to multilateral approval, as defined in 49 CFR 173.403 (Revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
 - c. A serial number that uniquely identifies each package which conforms to the approved design and is assigned to, and legibly and durably marked on, the outside of each package.
 - d. The licensee shall ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce the effectiveness of the packaging;
 - e. Where the maximum normal operating pressure will exceed 35 kPa (5 lbf/in²) gauge, the licensee shall test the containment system at an internal pressure at least 50 percent higher than the maximum normal operating pressure, to verify the capability of that system to maintain its structural integrity at that pressure; and
2. A Type B(U) package, a Type B(M) package, a low specific activity (LSA) material package or a fissile material package, previously approved by the NRC but without the "-85" designation in the identification number of the NRC certificate of compliance, may be used under the general license of subsection (A) with the following additional conditions:
 - a. Fabrication of the packaging is satisfactorily completed by April 1, 1999 as demonstrated by application of its model number in accordance with 10 CFR 71.85(c) (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - b. A package that is used for a shipment to a location outside the United States is subject to multilateral approval as defined in 49 CFR 173.403 (Revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
 - c. A serial number which uniquely identifies each package which conforms to the approved design and is assigned to, and legibly and durably marked on, the outside of each package.
 3. A licensee may modify the design and authorized contents of a Type B package, or a fissile material package, previously approved by NRC, provided:
 - a. The modifications of a Type B package are not significant with respect to the design, operating characteristics, or safe performance of the containment system, when the package is subjected to the tests specified in 10 CFR 71.71 and 71.73 (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - b. The modifications of a fissile material package are not significant, with respect to the prevention of criticality, when the package is subjected to the tests specified in 10 CFR 71.71 and 71.73 (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
 - c. The modifications to the package satisfy the requirements of this Section.
 4. The NRC will revise the package identification number to designate previously approved package designs as B(U), B(M), AF, BF, or A as applicable, and with the identification number suffix "-85" after receipt of an application demonstrating that the design meets the requirements of this Section.
 5. For purposes of this Section, package types are defined in 10 CFR 71.4, revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C. A general license is issued to any licensee of the Agency to transport fissile material, or to deliver to a carrier for transport, licensed material in a specification container for fissile mate-

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rial or for a Type B quantity of radioactive material as specified in 49 CFR 173 and 178 (Revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), if the following requirements are met:

1. The licensee shall maintain a quality assurance program approved by the Agency as satisfying R12-1-1507.
2. The licensee shall:
 - a. Maintain a copy of the specification; and
 - b. Comply with the terms and conditions of the specification and the applicable requirements in 10 CFR 71, Subparts A, G, and H, revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
3. The licensee may not use the specification container for a shipment to a location outside the United States, except by multilateral approval, as defined in 49 CFR 173.403, revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
4. The general license applies only when a package's contents:
 - a. Contain no more than a Type A quantity of radioactive material; and
 - b. Contain less than 500 total grams of beryllium, graphite, or hydrogenous material enriched in deuterium.
5. The general license applies only to packages containing fissile material that are labeled with a CSI which:
 - a. Has been determined in accordance with subsection (E);
 - b. Has a value less than or equal to 10; and
 - c. For a shipment of multiple packages containing fissile material, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).
6. The CSI value must meet the following requirements:
 - a. The value for the CSI must be greater than or equal to the number calculated by the following equation: $CSI = 10[(\text{grams of } ^{235}\text{U}/X) + (\text{grams of } ^{235}\text{U}/Y) + \text{grams of } ^{235}\text{U}/Z]$;
 - b. The calculated CSI must be rounded up to the first decimal place;
 - c. The values of X, Y, and Z used in the CSI equation must be taken from Tables 71-1 or 71-2 as appropriate located in 10 CFR 71.22, (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - d. If Table 71-2 is used to obtain the value of X, then the values for the terms in the equation for uranium-233 and plutonium must be assumed to be zero; and
 - e. Table 71-1 values for X, Y, and Z must be used to determine the CSI if:
 - i. Uranium-233 is present in the package;
 - ii. The mass of plutonium exceeds 1 percent of the mass of uranium-235;
 - iii. The uranium is of unknown uranium-235 enrichment or greater than 24 weight percent enrichment; or
 - iv. Substances having a moderating effectiveness (i.e., an average hydrogen density greater than H₂O) (e.g., certain hydrocarbon oils or plastics)

are present in any form, except as polyethylene used for packing or wrapping.

- D. Foreign packaging.
 1. A general license is issued to any licensee of the Agency to transport, or to deliver to a carrier for transport, licensed material in a package the design of which has been approved in a foreign national competent authority certificate that has been revalidated by the Federal Department of Transportation as meeting the applicable requirements of 49 CFR 171.12, revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 2. Except as otherwise provided in this Section, the general license applies only to a licensee who has a quality assurance program approved by the Agency as satisfying the applicable provisions of R12-1-1507.
 3. This general license applies only to:
 - a. Shipments made to or from locations outside the United States.
 - b. A licensee that:
 - i. Has a copy of the applicable certificate, the revalidation, and the drawings and other documents referenced in the certificate, relating to the use and maintenance of the packaging and to the actions to be taken before shipment; and
 - ii. Complies with the terms and conditions of the certificate and revalidation, and with the applicable requirements in 10 CFR 71, Subparts A, G, and H, revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. With respect to the quality assurance provisions of Subpart H of the regulations, the licensee is exempt from design, construction, and fabrication requirements.
- E. Assumptions as to unknown properties. When the isotopic abundance, mass, concentration, degree of irradiation, degree of moderation, or other pertinent property of fissile material in any package is not known, the licensee shall package the fissile material as if the unknown properties have credible values that will cause the maximum neutron multiplication.
- F. Routine determination before each shipment of licensed material shall ensure that the package with its contents satisfies the applicable requirements of this Article and of the license. The licensee shall determine that:
 1. The package is proper for the contents to be shipped;
 2. The package is in unimpaired physical condition except for superficial defects such as marks or dents;
 3. Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;
 4. Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;
 5. Any pressure relief device is operable and set in accordance with written procedures;
 6. The package has been loaded and closed in accordance with written procedures;
 7. For fissile material, any moderator or neutron absorber, if required, is present and in proper condition;
 8. Any structural part of the package that could be used to lift or tie down the package during transport is rendered inoperable for that purpose, unless it satisfies the design requirements of 10 CFR 71.45 (revised January 1, 2010,

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incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);

9. The level of non-fixed (removable) radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable, and within the limits specified in DOT regulations in 49 CFR 173.443 (revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
10. External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in 10 CFR 71.47 (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), at any time during transportation; and
11. Accessible package surface temperatures will not exceed the limits specified in 10 CFR 71.43(g) (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), at any time during transportation.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (12-3).

R12-1-1511. Air Transport of Plutonium

- A. Notwithstanding the provisions of any general licenses and notwithstanding any exemptions stated directly in this Section or included indirectly by citation of 49 CFR 107, and 171 through 180, previously incorporated in this Article, as may be applicable, the licensee shall ensure that plutonium in any form, whether for import, export, or domestic shipment, is not transported by air or delivered to a carrier for air transport unless:
 1. The plutonium is contained in a medical device designed for individual human application; or
 2. The plutonium is contained in a material in which the specific activity is less than or equal to the activity concentration values for Plutonium specified in 10 CFR 71, Appendix A, Table A-2 (Revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), and in which the radioactivity is essentially uniformly distributed; or
 3. The plutonium is shipped in a single package containing no more than an A2 quantity of plutonium in any isotope or form, and is shipped in accordance with R12-1-1503 and 10 CFR 71.5 (Revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 4. The plutonium is shipped in a package specifically authorized for the shipment of plutonium by air in the Certificate of Compliance for that package issued by the NRC.
- B. Nothing in subsection (A) is to be interpreted as removing or diminishing the requirements of 10 CFR 73.24, January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C. For a shipment of plutonium by air that is subject to subsection (A)(4), the licensee shall, through special arrangement with the carrier, require compliance with 49 CFR 175.704, revised October 1, 2007, incorporated by reference, and available

under R12-1-101. This U.S. Department of Transportation regulation is applicable to the air transport of plutonium. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1512. Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste

A licensee shall provide advance notification to the Governor, or the Director of the Agency, of the shipment of licensed material as specified in 10 CFR 71.97, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1513. Opening Instructions

Before delivery of a package to a carrier for transport, the licensee shall ensure that any special instructions needed to safely open the package have been sent to, or otherwise made available to, the consignee for the consignee's use in accordance with 10 CFR 20.1906(e) revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (12-3).

R12-1-1514. Reserved

R12-1-1515. Exemption for Low-level Radioactive Materials
A licensee is exempt from all the requirements of 10 CFR 71 with respect to shipment or carriage of the low-level materials listed in 10 CFR 71.14(a), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

Appendix A. Repealed**Historical Note**

Adopted effective December 20, 1985 (Supp. 85-6).
Repealed effective June 13, 1997 (Supp. 97-2).

ARTICLE 16. RESERVED**ARTICLE 17. WIRELINE SERVICE OPERATIONS AND SUBSURFACE TRACER STUDIES****R12-1-1701. Definitions**

"Energy compensation source (ECS)" means a small sealed source, with activity that does not exceed 3.7 Mbq (100 microcuries), contained within a logging tool or other tool component.

"Tritium neutron generator target source" means a tritium source contained within a tritium neutron generator tube that produces neutrons for use in well logging applications.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

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R12-1-1702. Agreement with Well Owner or Operator

- A. A licensee that performs wireline service (well logging) with a sealed source shall enter into a written agreement with the employing well owner or operator that identifies the party responsible for complying with each of the following requirements. The responsible party shall:
1. Make a reasonable effort to recover any sealed source that may be lodged in the well;
 2. Not attempt to recover a sealed source in a manner which, in the licensee's opinion, is likely to result in its rupture;
 3. Perform the radiation monitoring required in R12-1-1723(A);
 4. Decontaminate anyone or anything contaminated with licensed material before releasing personnel or equipment from the site or releasing the site for unrestricted use; and
 5. If a source is classified by the Agency as irretrievable after reasonable efforts at recovery, implement the following requirements within 30 days:
 - a. Immobilize the irretrievable well logging source and seal it in place with a cement plug;
 - b. Provide a means to prevent inadvertent intrusion that could damage the source, unless the site is rendered inaccessible to subsequent drilling operations; and
 - c. Mount a permanent identification plaque, constructed of long-lasting material, such as stainless steel, brass, bronze, or Monel, in a conspicuous location adjacent to the well. The responsible party shall ensure that the plaque size is at least 17 cm (7 inches) square and 3 mm (1/8 inch) thick and the following information is written on the plaque:
 - i. The word "CAUTION,"
 - ii. The radiation symbol (the color requirement in R12-1-428(A) does not apply),
 - iii. The date the source was abandoned,
 - iv. The name of the well owner or operator that employed the licensee;
 - v. The well name and identification number or other designation,
 - vi. An identification of each source by radionuclide and quantity of radionuclide,
 - vii. The depth of the source and depth to the top of the plug, and
 - viii. The following warning, "DO NOT RE-ENTER THIS WELL," and
 - d. Notify the Oil and Gas Conservation Commission, Department of Water Resources, or Department of Environmental Quality of the abandoned source, as required by law.
- B. A licensee shall maintain a copy of the agreement at the field station during logging operations. The licensee shall retain a copy of the written agreement for three years after completion of the well logging operation.
- C. A licensee may apply in accordance with A.R.S. § 30-654(B)(13) for Agency approval, on a case-by-case basis, of proposed procedures to abandon an irretrievable well logging source in a manner not otherwise authorized in subsection (A)(5).
- D. A written agreement between the licensee and the well owner or operator is not required if the licensee and the well owner or operator are employed by the same corporation or other business entity. If so, the licensee shall comply with the requirements in subsections (A)(1) through (A)(5).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section

made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1703. Limits on Levels of Radiation

A person in possession of any source of radiation shall transport the source according to 12 A.A.C. 1, Article 15, and use or store the source in a manner that is consistent with the dose limits in 12 A.A.C. 1, Article 4.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1704. Reserved**R12-1-1705. Reserved****R12-1-1706. Reserved****R12-1-1707. Reserved****R12-1-1708. Reserved****R12-1-1709. Reserved****R12-1-1710. Reserved****R12-1-1711. Reserved****R12-1-1712. Storage Precautions**

- A. A person storing or transporting a source of radiation shall place the source in an approved storage container, transport container, or both. The container or combination of containers shall have a lock, or tamper-proof seal for calibration sources, to prevent unauthorized removal of the source and exposure to radiation.
- B. A person storing or transporting a source of radiation shall store the source in a manner that will minimize danger from explosion or fire.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1713. Transportation Precautions

Each licensee shall ensure that transport containers are physically secured in the transporting vehicle to prevent accidental movement, loss, tampering, or unauthorized removal.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1714. Radiation Survey Instruments

- A. A licensee shall maintain at each field station and temporary job site a calibrated and operable radiation survey instrument capable of detecting beta and gamma radiation. The licensee shall ensure that the radiation survey instrument is capable of measuring 1.0 microsievert (0.1 millirem) per hour through 500 microsievert (50 millirem) per hour.
- B. A licensee shall ensure that additional calibrated and operable radiation detection instruments are available as needed and that the instruments are sensitive enough to detect the low radiation and contamination levels that could be encountered if a sealed source is ruptured.
- C. A licensee shall ensure that the radiation survey instrument required in subsection (A) is calibrated
1. At intervals not to exceed six months and after each instrument servicing;
 2. At energies comparable to the energies of the radiation sources used;

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3. For linear scale instruments, at two points located approximately 1/3 and 2/3 of full-scale on each scale or for logarithmic scale instruments, at mid-range of each decade, and at two points of at least one decade; and
 4. So that accuracy within plus or minus 20 percent of the true radiation level can be demonstrated on each scale.
- D. A licensee shall retain calibration records for a period of three years from the date of calibration.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1715. Leak Testing of Sealed Sources

- A. A licensee that uses a sealed source shall ensure that the source is tested for leakage according to subsection (C). The licensee shall maintain a record of leak test results in units of Becquerels (Bq) or microcuries, for inspection by the Agency for three years after the leak test is performed.
- B. A person authorized under R12-1-417(C) shall wipe a sealed source using a leak test kit or a similar method approved by the Agency, NRC, or another Agreement State. The authorized person shall take the wipe sample from the nearest accessible point to the sealed source where contamination might accumulate, and ensure the wipe sample is analyzed for radioactive contamination. The authorized person shall use a method of analysis capable of detecting the presence of 185 Bq (0.005 microcuries) of radioactive material on the test sample.
- C. Test frequency.
1. A licensee shall ensure that each sealed source (except an energy compensation source (ECS)) is tested in accordance with R12-1-417. In the absence of a certificate from a transferor that a test has been performed within six months before transfer, a licensee shall not use the sealed source until it is tested.
 2. A licensee shall ensure that each ECS that is not exempt from testing under subsection (E) is tested at intervals that do not exceed three years. In the absence of a certificate from a transferor that a test has been performed within three years before transfer, a licensee shall not use the ECS until it is tested.
- D. Removal of leaking source from service.
1. If a test conducted according to this Section reveals the presence of 185 Bq (0.005 microcuries) or more of removable radioactive material, a licensee shall remove the sealed source from service immediately and have it decontaminated, repaired, or disposed of by an Agency, NRC, or Agreement State licensee that is authorized to perform these functions. The licensee shall check the equipment associated with the leaking source for radioactive contamination and, if the equipment is contaminated, have it decontaminated or disposed of by an Agency, NRC, or Agreement State licensee that is authorized to perform the chosen function.
 2. A licensee shall submit a report to the Agency, within five days of receiving positive test results. The report shall describe the equipment involved in the leak, the test results, any contamination that resulted from the leaking source, and each corrective action taken up to the date on the report.
- E. The following sealed sources are exempt from the periodic leak test requirements in subsections (A) through (D):
1. Hydrogen-3 (tritium) sources;
 2. Sources that contain licensed material with a half-life of 30 days or less;

3. Sealed sources that contain licensed material in gaseous form;
4. Sources of beta- or gamma-emitting radioactive material with an activity of 3.7 MBq [100 microcuries] or less; and
5. Sources of alpha- or neutron-emitting radioactive material with an activity of 0.37 MBq [10 microcuries] or less.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1716. Inventory

A licensee shall conduct a physical inventory every six months to account for all licensed material received and possessed under the license. The licensee shall maintain records of the inventory for three years from the date of the inventory for inspection by the Agency. The inventory shall indicate the quantity and kind of licensed material, the location of the licensed material, the date of the inventory, and the name of each individual who conducted the inventory. Physical inventory records may be combined with leak test records.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1717. Utilization Records

Each licensee shall maintain records of use for three years from the date of the recorded event, that contain the following information for each source of radiation:

1. Make, model number, and serial number or a description of each source of radiation used;
2. The identity of the well-logging supervisor or the field unit to which the source is assigned;
3. Locations and dates of use; and
4. In the case of tracer materials and radioactive markers, the radionuclide and activity undertaken in a particular well.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1718. Design and Performance Criteria for Sealed Sources

- A. A licensee shall use a sealed source for well logging applications if the sealed source:
1. Is doubly encapsulated;
 2. Contains licensed material in a chemical and physical form that is insoluble and nondispersible; and
 3. Meets the requirements of subsection (B), (C), or (D).
- B. For a sealed source manufactured on or before July 14, 1989, a licensee may use a sealed source in well logging applications that meets the requirements of USASI N5.4-1968, Classification of Sealed Radioactive Sources, available from the American National Standards Institute at 25 West 43rd Street, 4th floor, New York, NY 10036, which is incorporated by reference and on file with the Agency, or the requirements in subsection (C) or (D). This incorporation by reference contains no future editions or amendments.
- C. For a sealed source manufactured after July 14, 1989, a licensee may use a sealed source in well logging applications

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that meets the oil-well logging requirements of ANSI/HPS N43.6-1997, Sealed Radioactive Sources--Classification, available from the American National Standards Institute at 25 West 43rd Street, 4th floor, New York, NY 10036, which is incorporated by reference and on file with the Agency. This incorporation by reference contains no future editions or amendments.

- D.** For a sealed source manufactured after July 14, 1989, a licensee may use a sealed source in well logging applications if the sealed source's prototype has been tested and found to maintain its integrity after each of the following required tests:
1. Temperature. The test source is held at -40°C for 20 minutes and 600°C for one hour, and then subjected to a thermal shock with a temperature drop from 600°C to 20°C within 15 seconds.
 2. Impact. A 5 kg steel hammer, 2.5 cm in diameter, is dropped from a height of 1 m onto the test source.
 3. Vibration. The test source is subjected to vibration in the 25 Hz to 500 Hz range at 5 g amplitude for 30 minutes.
 4. Puncture. A 1 gram hammer with a pin, 0.3 cm in diameter, is dropped from a height of 1 m onto the test source.
 5. Pressure. The test source is subjected to an external pressure of 1.695×10^7 pascals (24,600 pounds per square inch absolute).
- E.** The requirements in subsections (A), (B), (C), and (D) do not apply to a sealed source that contains licensed material in gaseous form.
- F.** The requirements in subsections (A), (B), (C), and (D) do not apply to an energy compensation source (ECS).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1719. Labeling

- A.** A licensee shall mark each source, source holder, or logging tool that contains radioactive material with a durable, legible, and clearly visible marking or label, consisting at minimum of the standard radiation caution symbol, without the conventional color requirement, and the following wording:

DANGER (or: CAUTION)
RADIOACTIVE

This labeling is required for each component transported as a separate piece of equipment regardless of size.

- B.** A licensee shall permanently attach to each transport container a durable, legible, and a clearly visible label consisting at minimum, of the standard radiation caution symbol and the following wording:

DANGER (or: CAUTION)
RADIOACTIVE
NOTIFY CIVIL AUTHORITIES (or name of company)

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1720. Inspection, Maintenance, and Opening of a Source or Source Holder

- A.** Each licensee shall visually check source holders, logging tools, and source handling tools for defects before each use to ensure that the equipment is in good working condition and that required labeling is present. If defects are found, the licensee shall remove equipment from service until it is repaired, and make a record listing: date of check, name of

inspector, equipment involved, each defect found, and repairs made. The licensee shall maintain each record for three years after a defect is found.

- B.** Each licensee shall have a program for semiannual visual inspection and routine maintenance of source holders, logging tools, injection tools, source handling tools, storage containers, transport containers, and uranium sinker bars to ensure that the required labeling is legible and that no physical damage is visible. If any defect is found, the licensee shall remove the equipment from service until it is repaired, and make a record listing; date of inspection, equipment involved, inspection and maintenance operations performed, each defect found, and each action taken to correct a defect. The licensee shall maintain each record for three years after a defect is found.
- C.** A licensee shall not remove a sealed source from a source holder or logging tool, or perform maintenance on a sealed source or source holder that contains a sealed source without written permission from the Agency.
- D.** If a sealed source is stuck in the source holder, a licensee shall not perform any operation, such as drilling, cutting, or chiseling, on the source holder unless the licensee is specifically authorized to perform the operation by the Agency.
- E.** The opening, repair, or modification of any sealed source is prohibited, unless authorized by the Agency, NRC, or an Agreement State.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section made by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1721. Training

- A.** A licensee shall not permit an individual to act as a logging supervisor until that person has:
1. Completed training in the subjects outlined in subsection (E);
 2. Received copies of, and instruction in:
 - a. The applicable rules contained in 12 A.A.C. 1;
 - b. The Agency license under which the logging supervisor will perform well logging; and
 - c. The licensee's operating and emergency procedures, required by R12-1-1722;
 3. Completed on-the-job training and demonstrated competence during a field evaluation in the use of licensed materials, remote handling tools, and radiation survey instruments; and
 4. Demonstrated understanding of the requirements in subsections (A)(1) and (A)(2) by successfully completing a written test.
- B.** The licensee shall not permit an individual to act as a logging assistant until that person has:
1. Received instruction in applicable rules of 12 A.A.C. 1;
 2. Received copies of, and instruction in, the licensee's operating and emergency procedures required by R12-1-1722;
 3. Demonstrated understanding of the materials listed in subsections (B)(1) and (B)(2) by successfully completing a written or oral test; and
 4. Received instruction in the use of licensed materials, remote handling tools, and radiation survey instruments that is related to the logging assistant's intended job responsibilities.
- C.** A licensee shall provide a safety training review for logging supervisors and logging assistants at least once during each calendar year. Each logging supervisor and logging assistant

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shall attend a safety training review at least once during the current calendar year.

- D.** A licensee shall maintain a record of each logging supervisor's and logging assistant's initial training and annual safety training review. The training records shall include copies of written tests and dates of oral tests given after the effective date of this Section. The licensee shall maintain the initial training records for three years following termination of employment, and maintain records of each annual safety training review, including a list of subjects covered during the review, for three years.
- E.** A licensee shall provide instruction in the following subjects in the training required by subsection (A)(1):
1. Fundamentals of radiation safety, including:
 - a. Characteristics of radiation;
 - b. Units of radiation dose and quantity of radioactivity;
 - c. Hazards of exposure to radiation;
 - d. Levels of radiation from licensed material;
 - e. Methods of controlling radiation dose (time, distance, and shielding); and
 - f. Radiation safety practices, including prevention of contamination and methods of decontamination;
 2. Radiation detection instruments, including:
 - a. Use, operation, calibration, and limitations of radiation survey instruments;
 - b. Survey techniques; and
 - c. Use of personnel monitoring equipment;
 3. Equipment, including:
 - a. Operation of equipment, including source handling equipment and remote handling tools;
 - b. Storage, control, and disposal of licensed material; and
 - c. Maintenance of equipment;
 4. The requirements of pertinent federal and state law, and
 5. Case histories of accidents in well logging.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1722. Operating and Emergency Procedures

Each licensee shall develop operating and emergency procedures on the following subjects:

1. Procedures designed to prevent individuals from being exposed to radiation in excess of the limits in Article 4 of this Chapter. This subject includes:
 - a. Use of a sealed source in a well without a surface casing for the purposes of protecting a fresh water aquifer, as appropriate;
 - b. Methods employed to minimize exposure from inhalation or ingestion of licensed tracer materials; and
 - c. Methods for minimizing exposure of individuals in the event of an accident;
2. Use of remote handling tools for manipulating a radioactive sealed source or tracer;
3. Methods and occasions for conducting a radiation survey;
4. Methods and occasions for locking and securing a source of radiation;
5. Personnel monitoring and the use of personnel monitoring equipment;
6. Transportation of a source to a temporary job site or field station, including packaging and placing the source of radiation in a vehicle, placarding the vehicle, and securing the source of radiation during transportation;

7. Procedure for notifying the Agency if there is an accident;
8. Maintenance of records;
9. Inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, and injection tools;
10. Procedure required if a sealed source is:
 - a. Lost or lodged downhole; or
 - b. Ruptured, including safeguards to prevent job site and personnel contamination, inhalation; and ingestion
11. Procedures required for picking up, receiving, and opening packages that contain radioactive material; and
12. Procedures required for site and equipment surveys and decontamination following tracer studies.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1723. Personnel Monitoring

- A.** A licensee shall not permit an individual to act as a logging supervisor or logging assistant unless that person wears, at all times during the handling of licensed radioactive materials, a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor.
- B.** A licensee shall assign a personnel dosimeter to each individual, who shall wear the assigned equipment.
- C.** A licensee shall replace film badges at least monthly and replace other personnel dosimeters at least quarterly. After replacement, a licensee shall promptly process each personnel dosimeter.
- D.** A licensee shall provide bioassay services to each individual who uses licensed materials in subsurface tracer studies if required by the license.
- E.** A licensee shall record exposures noted from personnel dosimeters required by subsection (A) and bioassay results and maintain these records for three years after the Agency terminates the radioactive material license.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1724. Radioactive Contamination Control

- A.** If a licensee detects evidence that a sealed source has ruptured or licensed materials have caused contamination, the licensee shall immediately initiate the emergency procedures required by R12-1-1722.
- B.** If contamination results from the use of licensed material in well logging, the licensee shall decontaminate all affected areas, equipment, and personnel.
- C.** During efforts to recover a source lodged in a well, the licensee shall continuously monitor, with a radiation detection instrument that complies with R12-1-1714 or a logging tool with a radiation detector, the well and any circulating fluids from the well to check for contamination resulting from damage to the source.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1725. Uranium Sinker Bars

A licensee may use a uranium sinker bar for a well logging application only if it is legibly impressed with the words "Caution Radioactive-Depleted Uranium" and "Notify Civil Authorities (or company name) if Found."

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1726. Energy Compensation Source

- A. A licensee may use an energy compensation source (ECS) in a logging tool, or other tool component, if the ECS contains a quantity of radioactive material that does not exceed 3.7 MBq (100 microcuries).
- B. If used in a well with a surface casing, an ECS is subject to all Sections of this Article except R12-1-1702, R12-1-1728, and R12-1-1751.
- C. If used in a well logging hole without a surface casing, an ECS is subject to all Sections of this Article.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1727. Neutron Generator Source

- A. A licensee may use a tritium neutron generator source to produce neutrons for well logging applications.
- B. If the activity of a tritium neutron generator source does not exceed 1.11 TBq (30 Curies) and the source is used in a well with a surface casing, the source is subject to all Sections of this Article except R12-1-1702 and R12-1-1751.
- C. If the activity of a neutron generator source is equal to or exceeds 1.11 TBq (30 Curies) or the source is used in a well without a surface casing, the source is subject to all Sections of this Article.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1728. Use of a Sealed Source in a Well Without a Surface Casing

A licensee may use a sealed source in a well without a surface casing if the licensee follows a procedure for reducing the probability that the source will be lodged in the well. The procedure shall be separately approved by the Agency or in a license issued by the Agency, NRC, or another Agreement State.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1729. Reserved**R12-1-1730. Reserved****R12-1-1731. Security**

- A. A logging supervisor shall be physically present at a temporary job site whenever licensed material is being handled or is not stored and locked in a vehicle or storage place. The logging supervisor may leave the job site to obtain assistance if a source becomes lodged in a well.
- B. During well logging, except when a radiation source is below ground or in a shipping or storage container, the logging supervisor or other individual designated by the logging supervisor shall maintain direct surveillance of the operation to prevent unauthorized entry into a restricted area, as defined in R12-1-102.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended

by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1732. Handling tools

The licensee shall provide and require the use of tools that will assure remote handling of sealed sources other than low-activity calibration sources.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2).

R12-1-1733. Subsurface Tracer Studies

- A. Any person who handles radioactive tracer material shall wear protective gloves and other appropriate protective clothing and equipment. Precautions shall be taken to avoid ingestion or inhalation of radioactive material.
- B. A licensee shall not inject radioactive material into potable aquifers without authority granted in a radioactive material license issued by the Agency.
- C. A licensee shall dispose of tracer study waste contaminated with radioactive material in accordance with R12-1-434.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1734. Use of a Sealed Source in a Well Without a Surface Casing and Particle Accelerators

- A. A licensee or registrant may use a sealed source in a well without a surface casing to protect a fresh water aquifer if the licensee follows the correct procedure for reducing the probability that the source will become lodged in the well.
- B. A licensee or registrant shall not begin well logging operations in a well without a surface casing unless the Agency has approved the licensee's procedure for logging in an uncased hole.
- C. A licensee or registrant shall not permit above-ground testing of a particle accelerator, designed for use in well-logging, which results in the production of radiation, unless the area or facility affected is controlled or shielded in a manner consistent with applicable requirements in Article 4 of this Chapter.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1735. Reserved**R12-1-1736. Reserved****R12-1-1737. Reserved****R12-1-1738. Reserved****R12-1-1739. Reserved****R12-1-1740. Reserved****R12-1-1741. Radiation Surveys**

- A. A licensee shall perform and make a record of a radiation survey using instruments or calculations of radiation levels in each area where radioactive material is stored.
- B. A licensee shall make and record a radiation survey using instruments or calculations of radiation levels in occupied positions and on the exterior of each vehicle used to transport radioactive material. The survey or calculation shall include each source of radiation or combination of sources to be transported in the vehicle.
- C. After removal of the sealed source from the logging tool and before departing the job site, a licensee shall ensure that the logging tool detector is energized, or a survey meter is used to

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test the logging tool for contamination. The licensee shall record the test for contamination.

- D. The licensee shall make and record each survey using an appropriate survey instrument for the radionuclide being used, at the job site or wellhead for each tracer operation, except those using Hydrogen-3, Carbon-14 and Sulfur-35. Each survey shall include measurements of radiation levels before and after each tracer operation.
- E. Records of surveys conducted according to subsections (A) through (D) shall include the date of each survey, the identification of each individual making the survey, identification of each survey instrument used, each radiation measurement in millirem or microsievert per hour, and an exact description of the location of the survey. A licensee shall retain records of a survey for three years after completion of the survey.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1742. Documents and Records Required at Field Stations

Each licensee shall maintain the following documents and records at the field station:

1. A copy of 12 A.A.C. 1;
2. The license, authorizing use of licensed material;
3. Operating and emergency procedures required by R12-1-1722;
4. The record of radiation survey instrument calibrations required by R12-1-1714;
5. The record of leak test results required by R12-1-1715;
6. Physical inventory records required by R12-1-1716;
7. Utilization records required by R12-1-1717;
8. Records of inspection and maintenance required by R12-1-1720;
9. Training records required by R12-1-1721; and
10. Survey records required by R12-1-1741.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1743. Documents and Records Required at Temporary Job Sites

Each licensee that conducts operations at a temporary job site shall maintain the following documents and records at the temporary job site until the well logging operation is completed:

1. Operating and emergency procedures required by R12-1-1722;
2. The most current calibration records for the radiation survey instruments in use at the site required by R12-1-1714;
3. The most current survey records required by R12-1-1741.
4. The shipping papers for transportation of radioactive materials required by license condition; and
5. If operating under reciprocity in accordance with R12-1-320, a copy of the Agency authorization for use of radioactive material in Arizona.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1744. Reserved

R12-1-1745. Reserved

R12-1-1746. Reserved

R12-1-1747. Reserved

R12-1-1748. Reserved

R12-1-1749. Reserved

R12-1-1750. Reserved

R12-1-1751. Notification of Incidents and Lost Sources; Abandonment Procedures for Irretrievable Sources

- A. If, after making a reasonable effort to recover a sealed source or device that contains radioactive material using methods that are not likely to result in damage or rupture and contamination, a licensee determines that the source or device is lodged in a well, the licensee shall:
1. Immediately notify the Agency by telephone of the circumstances that resulted in the inability to retrieve the source and, if there is no evidence of contamination, obtain the following from the Agency:
 - a. A determination that the source is irretrievable and abandonment is necessary because further efforts to recover the source are likely to result in an immediate threat to public health and safety, and
 - b. An approval to implement abandonment procedures;
 2. Advise the well owner or operator, as applicable, of the abandonment procedures implemented under R12-1-1702(A) and (C); and
 3. Either ensure that abandonment procedures are implemented within 30 days after the Agency classifies the source as irretrievable or request an extension of time if unable to complete abandonment procedures.
- B. A licensee shall immediately notify the Agency by telephone and subsequently, within 30 days, by confirmatory letter if the licensee knows or has reason to believe that a sealed source has been ruptured or the well has otherwise been contaminated. The letter shall describe the well location, the magnitude and extent of radioactive contamination, the consequences of the rupture, and the efforts planned or initiated to mitigate the consequences.
- C. A licensee shall notify the Agency of the theft or loss of any radioactive material, radiation overexposure, excessive levels and concentrations of radiation, and incidents as required by R12-1-443, R12-1-444, and R12-1-445.
- D. A licensee shall, within 30 days after a sealed source has been classified as irretrievable, report in writing to the Agency. The licensee shall send a copy of the report to each state or federal agency that issued permits or otherwise approved of the drilling operation. The report shall contain the following information:
1. Date of occurrence;
 2. A description of the irretrievable well logging source involved, including the name of the radionuclide and its quantity, and the chemical and physical form of the radionuclide;
 3. Surface location and identification of the well;
 4. Results of efforts to immobilize and seal the source in place;
 5. A brief description of the attempted recovery effort;
 6. Depth of the source;
 7. Depth of the top of the cement plug;
 8. Depth of the well;
 9. The reasons why further efforts to recover the source are likely to result in an immediate threat to public health and safety, necessitating abandonment;

10. Information contained on the permanent identification plaque; and
11. State and federal agencies receiving a copy of the report.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 18. RESERVED

ARTICLE 19. PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL

R12-1-1901. Purpose

This Article has been established to provide the requirements for the physical protection program for any licensee that possesses an aggregated category 1 or category 2 quantity of radioactive material listed in Appendix A to this Article. These requirements provide reasonable assurance of the security of category 1 or category 2 quantities of radioactive material by protecting these materials from theft or diversion. Specific requirements for access to material, use of material, transfer of material, and transport of material are included. No provision of this Article authorizes possession of licensed material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1902. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1903. Scope

- A. R12-1-1921 through R12-1-1957 of this Article apply to any person who, under the rules in this chapter, possesses or uses at any site, an aggregated category 1 or category 2 quantity of radioactive material.
- B. R12-1-1971 through R12-1-1981 of this Article applies to any person who, under the rules of this chapter:
 1. Transports or delivers to a carrier for transport in a single shipment, a category 1 or category 2 quantity of radioactive material; or
 2. Imports or exports a category 1 or category 2 quantity of radioactive material; the provisions only apply to the domestic portion of the transport.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1904. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1905. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

“Access control means a system for allowing only approved individuals to have unescorted access to the security zone and for ensuring that all other individuals are subject to escorted access.

“Act” means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto.

“Aggregated” means accessible by the breach of a single physical barrier that would allow access to radioactive material in any form, including any devices that contain the radioactive material, when the total activity equals or exceeds a category 2 quantity of radioactive material.

“Agreement State” means any state with which the Atomic Energy Commission or the U.S. Nuclear Regulatory Commission has entered into an effective agreement under subsection 274b. of the Act. Non-agreement State means any other State.

“Approved individual” means an individual whom the licensee has determined to be trustworthy and reliable for unescorted access in accordance with R12-1-1921 through R12-1-1933 of this Article and who has completed the training required by R12-1-1943(C).

“Background investigation” means the investigation conducted by a licensee or applicant to support the determination of trustworthiness and reliability.

“Becquerel (Bq)” means one disintegration per second.

“Byproduct material” means the same as in R12-1-102.

“Category 1 quantity of radioactive material” means a quantity of radioactive material meeting or exceeding the category 1 threshold in Table 1 of Appendix A to this Article. This quantity is determined by calculating the ratio of the total activity of each radionuclide to the category 1 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds 1, the quantity would be considered a category 1 quantity. Category 1 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

“Category 2 quantity of radioactive material” means a quantity of radioactive material meeting or exceeding the category 2 threshold but less than the category 1 threshold in Table 1 of Appendix A to this Article. This quantity is determined by calculating the ratio of the total activity of each radionuclide to the category 2 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds 1, the quantity would be considered a category 2 quantity. Category 2 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

“Commission” means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

“Curie” means the same as in R12-1-102.

“Diversion” means the unauthorized movement of radioactive material subject to this Article to a location different from the material's authorized destination inside or outside of the site at which the material is used or stored.

“Escorted access” means accompaniment while in a security zone by an approved individual who maintains continuous direct visual surveillance at all times over an individual who is not approved for unescorted access.

“Fingerprint orders” means the orders issued by the U.S. Nuclear Regulatory Commission or the legally binding requirements issued by Agreement States that require fingerprints and criminal history records checks for individuals with unescorted access to category 1 and category 2 quantities of radioactive material or safeguards information-modified handling.

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“Government agency” means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

“License”, except where otherwise specified, means a license for byproduct material issued pursuant to the rules in Articles 3, 5, 7, and 15 of this chapter.

“License issuing authority” means the licensing agency that issued the license, i.e. the Agency, U.S. Nuclear Regulatory Commission, or the appropriate agency of an Agreement State.

“Local law enforcement agency (LLEA)” means a public or private organization that has been approved by a federal, state, or local government to carry firearms and make arrests, and is authorized and has the capability to provide an armed response in the jurisdiction where the licensed category 1 or category 2 quantity of radioactive material is used, stored, or transported.

“Lost or missing licensed material” means licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

“Mobile device” means a piece of equipment containing licensed radioactive material that is either mounted on wheels or casters, or is otherwise equipped for moving without a need for disassembly or dismounting; or designed to be hand carried. Mobile devices do not include stationary equipment installed in a fixed location.

“Movement control center” means an operations center that is remote from transport activity and that maintains position information on the movement of radioactive material, receives reports of attempted attacks or thefts, provides a means for reporting these and other problems to appropriate agencies and can request and coordinate appropriate aid.

“No-later-than arrival time” means the date and time that the shipping licensee and receiving licensee have established as the time at which an investigation will be initiated if the shipment has not arrived at the receiving facility. The no-later-than arrival time may not be more than 6 hours after the estimated arrival time for shipments of category 2 quantities of radioactive material.

“Person” means:

Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the DOE (except that the Department shall be considered a person within the meaning of the rules in 10 CFR chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021), the Nuclear Waste Policy Act of 1982 (96 Stat. 2201), and section 3(b)(2) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (99 Stat. 1842), any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and

Any legal successor, representative, agent, or agency of the foregoing.

“Reviewing official” means the individual who shall make the trustworthiness and reliability determination of an individual to determine whether the individual may have, or continue to have, unescorted access to the category 1 or category 2 quantities of radioactive materials that are possessed by the licensee.

“Sabotage” means deliberate damage, with malevolent intent, to a category 1 or category 2 quantity of radioactive material, a device that contains a category 1 or category 2 quantity of radioactive material, or the components of the security system.

“Safe haven” means a readily recognizable and readily accessible site at which security is present or from which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement authorities.

“Security zone” means any temporary or permanent area determined and established by the licensee for the physical protection of category 1 or category 2 quantities of radioactive material.

“State” means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

“Telemetric position monitoring system” means a data transfer system that captures information by instrumentation and/or measuring devices about the location and status of a transport vehicle or package between the departure and destination locations.

“Trustworthiness and reliability” means characteristics of an individual considered dependable in judgment, character, and performance, such that unescorted access to category 1 or category 2 quantities of radioactive material by that individual does not constitute an unreasonable risk to the public health and safety or security. A determination of trustworthiness and reliability for this purpose is based upon the results from a background investigation.

“Unescorted access” means solitary access to an aggregated category 1 or category 2 quantity of radioactive material or the devices that contain the material.

“United States” when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1906. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1907. Communications

Except where otherwise specified or covered under licensing program as provided in this chapter, all communications and reports concerning the rules in this Article may be sent as follows:

1. By mail addressed to: ATTN: Arizona Radiation Regulatory Agency; Radioactive Materials Program; 4814 South 40th Street, Phoenix, Arizona 85040;
2. By hand delivery to the Agencies’ offices at 4814 South 40th Street, Phoenix, Arizona 85040;
3. Where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM.

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Electronic submissions shall be made in a manner that enables the Agency to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Electronic submissions can be by visiting the Agency's Website at <http://www.azrra.gov> and selecting specific RAM (Radioactive Material) Staff contact information or by email to ram@azrra.gov.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1908. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1909. Interpretations

Except as specifically authorized by the Agency in writing, no interpretations of the meaning of the rules in this Article by any officer or employee of the Agency other than a written interpretation by the Arizona Assistant Attorney General counsel assigned to the Agency will be recognized as binding upon the Agency.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1910. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1911. Specific Exemptions

- A.** The Agency may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the rules in this Article as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.
- B.** Any licensee's NRC-licensed activities are exempt from the requirements of R12-1-1921 through R12-1-1957 of this Article to the extent that its activities are included in a security plan required by 10 CFR part 73 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** A licensee that possesses radioactive waste that contains category 1 or category 2 quantities of radioactive material is exempt from the requirements of R12-1-1921 through R12-1-1981 of this Article, except that any radioactive waste that contains discrete sources, ion-exchange resins, or activated material that weighs less than 2,000 kg (4,409 lbs.) is not exempt from the requirements of this Article. The licensee shall implement the following requirements to secure the radioactive waste:
1. Use continuous physical barriers that allow access to the radioactive waste only through established access control points;
 2. Use a locked door or gate with monitored alarm at the access control point;
 3. Assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and
 4. Immediately notify the LLEA and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage, or diversion of the radioactive waste that contains category 1 or category 2 quantities of radioactive material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1912. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1913. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1914. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1915. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1916. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1917. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1918. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1919. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1920. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1921. Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material**A. General:**

1. Each licensee that possesses an aggregated quantity of radioactive material at or above the category 2 threshold shall establish, implement, and maintain its access authorization program in accordance with the requirements of this Article.
2. An applicant for a new license and each licensee that would become newly subject to the requirements of this Article upon application for modification of its license shall implement the requirements of this Article, as appropriate, before taking possession of an aggregated category 1 or category 2 quantity of radioactive material.
3. Any licensee that has not previously implemented the Security Orders or been subject to the provisions of R12-1-1921 through R12-1-1933 shall implement the provisions of R12-1-1921 through R12-1-1933 before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

B. General performance objective: The licensee's access authorization program shall ensure that the individuals specified in subsection (C)(1) are trustworthy and reliable.**C. Applicability:**

1. Licensees shall subject the following individuals to an access authorization program:

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- a. Any individual whose assigned duties require unescorted access to category 1 or category 2 quantities of radioactive material or to any device that contains the radioactive material; and
 - b. Reviewing officials.
2. Licensees need not subject the categories of individuals listed in R12-1-1929(A) to the investigation elements of the access authorization program.
 3. Licensees shall approve for unescorted access to category 1 or category 2 quantities of radioactive material only those individuals with job duties that require unescorted access to category 1 or category 2 quantities of radioactive material.
 4. Licensees may include individuals in the access authorization program under R12-1-1921 through R12-1-1933 and needing access to safeguards information-modified handling under 10 CFR part 73 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1922. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1923. Access Authorization Program Requirements

- A. Granting unescorted access authorization:
 1. Licensees shall implement the requirements of this Article for granting initial or reinstated unescorted access authorization.
 2. Individuals who have been determined to be trustworthy and reliable shall also complete the security training required by R12-1-1943(C) before being allowed unescorted access to category 1 or category 2 quantities of radioactive material.
- B. Reviewing officials:
 1. Reviewing officials are the only individuals who may make trustworthiness and reliability determinations that allow individuals to have unescorted access to category 1 or category 2 quantities of radioactive materials possessed by the licensee.
 2. Each licensee shall name one or more individuals to be reviewing officials. After completing the background investigation on the reviewing official, the licensee shall provide under oath or affirmation, a certification that the reviewing official is deemed trustworthy and reliable by the licensee. The fingerprints of the named reviewing official shall be taken by a law enforcement agency, Federal or State agencies that provide fingerprinting services to the public, or commercial fingerprinting services authorized by a State to take fingerprints. The licensee shall recertify that the reviewing official is deemed trustworthy and reliable every 10 years in accordance with R12-1-1925(C).
 3. Reviewing officials shall be permitted to have unescorted access to category 1 or category 2 quantities of radioactive materials or access to safeguards information or safeguards information-modified handling, if the licensee possesses safeguards information or safeguards information-modified handling. Reviewing officials permitted unescorted access to category 1 or category 2 quantities of radioactive materials shall receive appropriate radiation safety training initially and at a frequency not to exceed 12 months. The licensee shall maintain records of the initial and refresher training for three years from the date of training for Agency review.
4. Reviewing officials cannot approve other individuals to act as reviewing officials.
5. A reviewing official does not need to undergo a new background investigation before being named by the licensee as the reviewing official if:
 - a. The individual has undergone a background investigation that included fingerprinting and an FBI criminal history records check and has been determined to be trustworthy and reliable by the licensee; or
 - b. The individual is subject to a category listed in R12-1-1929(A).
- C. Informed consent:
 1. Licensees may not initiate a background investigation without the informed and signed consent of the subject individual. This consent shall include authorization to share personal information with other individuals or organizations as necessary to complete the background investigation. Before a final adverse determination, the licensee shall provide the individual with an opportunity to correct any inaccurate or incomplete information that is developed during the background investigation. Licensees do not need to obtain signed consent from those individuals that meet the requirements of R12-1-1925(B). A signed consent shall be obtained prior to any reinvestigation.
 2. The subject individual may withdraw his or her consent at any time. Licensees shall inform the individual that:
 - a. If an individual withdraws his or her consent, the licensee may not initiate any elements of the background investigation that were not in progress at the time the individual withdrew his or her consent; and
 - b. The withdrawal of consent for the background investigation is sufficient cause for denial or termination of unescorted access authorization.
- D. Personal history disclosure: Any individual who is applying for unescorted access authorization shall disclose the personal history information that is required by the licensee's access authorization program for the reviewing official to make a determination of the individual's trustworthiness and reliability. Refusal to provide, or the falsification of, any personal history information required by this Article is sufficient cause for denial or termination of unescorted access.
- E. Determination basis:
 1. The reviewing official shall determine whether to permit, deny, unfavorably terminate, maintain, or administratively withdraw an individual's unescorted access authorization based on an evaluation of all of the information collected to meet the requirements of this Article.
 2. The reviewing official may not permit any individual to have unescorted access until the reviewing official has evaluated all of the information collected to meet the requirements of this Article and determined that the individual is trustworthy and reliable. The reviewing official may deny unescorted access to any individual based on information obtained at any time during the background investigation.
 3. The licensee shall document the basis for concluding whether or not there is reasonable assurance that an individual is trustworthy and reliable.
 4. The reviewing official may terminate or administratively withdraw an individual's unescorted access authorization based on information obtained after the background

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investigation has been completed and the individual granted unescorted access authorization.

5. Licensees shall maintain a list of persons currently approved for unescorted access authorization. When a licensee determines that a person no longer requires unescorted access or meets the access authorization requirement, the licensee shall remove the person from the approved list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to have unescorted access to the material.

F. Procedures: Licensees shall develop, implement, and maintain written procedures for implementing the access authorization program. The procedures shall include provisions for the notification of individuals who are denied unescorted access. The procedures shall include provisions for the review, at the request of the affected individual, of a denial or termination of unescorted access authorization. The procedures shall contain a provision to ensure that the individual is informed of the grounds for the denial or termination of unescorted access authorization and allow the individual an opportunity to provide additional relevant information.

G. Right to correct and complete information:

1. Prior to any final adverse determination, licensees shall provide each individual subject to this Article with the right to complete, correct, and explain information obtained as a result of the licensee's background investigation. Confirmation of receipt by the individual of this notification shall be maintained by the licensee for a period of 1 year from the date of the notification.
2. If, after reviewing his or her criminal history record, an individual believes that it is incorrect or incomplete in any respect and wishes to change, correct, update, or explain anything in the record, the individual may initiate challenge procedures. These procedures include direct application by the individual challenging the record to the law enforcement agency that contributed the questioned information or a direct challenge as to the accuracy or completeness of any entry on the criminal history record to the Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Division, ATTN: SCU, Mod. D-2, 1000 Custer Hollow Road, Clarksburg, WV 26306 as set forth in 28 CFR 16.30 through 16.34. In the latter case, the Federal Bureau of Investigation (FBI) will forward the challenge to the agency that submitted the data, and will request that the agency verify or correct the challenged entry. Upon receipt of an official communication directly from the agency that contributed the original information, the FBI Identification Division makes any changes necessary in accordance with the information supplied by that agency. Licensees shall provide at least 10 days for an individual to initiate action to challenge the results of an FBI criminal history records check after the record being made available for his or her review. The licensee may make a final adverse determination based upon the criminal history records only after receipt of the FBI's confirmation or correction of the record.

H. Records:

1. The licensee shall retain documentation regarding the trustworthiness and reliability of individual employees for 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.
2. The licensee shall retain a copy of the current access authorization program procedures as a record for 3 years after the procedure is no longer needed. If any portion of

the procedure is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.

3. The licensee shall retain the list of persons approved for unescorted access authorization for 3 years after the list is superseded or replaced.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1924. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1925. Background Investigations

A. Initial investigation: Before allowing an individual unescorted access to category 1 or category 2 quantities of radioactive material or to the devices that contain the material, licensees shall complete a background investigation of the individual seeking unescorted access authorization. The scope of the investigation shall encompass at least the 7 years preceding the date of the background investigation or since the individual's eighteenth birthday, whichever is shorter. The background investigation shall include at a minimum:

1. Fingerprinting and an FBI identification and criminal history records check in accordance with R12-1-1927;
2. Verification of true identity. Licensees shall verify the true identity of the individual who is applying for unescorted access authorization to ensure that the applicant is who he or she claims to be. A licensee shall review official identification documents (e.g., driver's license; passport; government identification; certificate of birth issued by the state, province, or country of birth) and compare the documents to personal information data provided by the individual to identify any discrepancy in the information. Licensees shall document the type, expiration, and identification number of the identification document, or maintain a photocopy of identifying documents on file in accordance with R12-1-1931. Licensees shall certify in writing that the identification was properly reviewed, and shall maintain the certification and all related documents for review upon inspection;
3. Employment history verification. Licensees shall complete an employment history verification, including military history. Licensees shall verify the individual's employment with each previous employer for the most recent 7 years before the date of application;
4. Verification of education. Licensees shall verify that the individual participated in the education process during the claimed period;
5. Character and reputation determination. Licensees shall complete reference checks to determine the character and reputation of the individual who has applied for unescorted access authorization. Unless other references are not available, reference checks may not be conducted with any person who is known to be a close member of the individual's family, including but not limited to the individual's spouse, parents, siblings, or children, or any individual who resides in the individual's permanent household. Reference checks under this section shall be limited to whether the individual has been and continues to be trustworthy and reliable;
6. The licensee shall also, to the extent possible, obtain independent information to corroborate that provided by

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the individual (e.g., seek references not supplied by the individual); and

7. If a previous employer, educational institution, or any other entity with which the individual claims to have been engaged fails to provide information or indicates an inability or unwillingness to provide information within a time frame deemed appropriate by the licensee but at least after 10 business days of the request or if the licensee is unable to reach the entity, the licensee shall document the refusal, unwillingness, or inability in the record of investigation; and attempt to obtain the information from an alternate source.

B. Grandfathering:

1. Individuals who have been determined to be trustworthy and reliable for unescorted access to category 1 or category 2 quantities of radioactive material under the Fingerprint Orders may continue to have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. These individuals shall be subject to the reinvestigation requirement.
2. Individuals who have been determined to be trustworthy and reliable under the provisions of 10 CFR part 73 revised January 1, 2015, incorporated by reference, available under R12-1-101, and containing no future editions or amendments; or the security orders for access to safeguards information, safeguards information-modified handling, or risk-significant material may have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. The licensee shall document that the individual was determined to be trustworthy and reliable under the provisions of 10 CFR part 73 revised January 1, 2015, incorporated by reference, available under R12-1-101, and containing no future editions or amendments; or a security order. Security order, in this context, refers to any order that was issued by the NRC that required fingerprints and an FBI criminal history records check for access to safeguards information, safeguards information-modified handling, or risk significant material such as special nuclear material or large quantities of uranium hexafluoride. These individuals shall be subject to the reinvestigation requirement.

- C. Re-investigations: Licensees shall conduct a reinvestigation every 10 years for any individual with unescorted access to category 1 or category 2 quantities of radioactive material. The reinvestigation shall consist of fingerprinting and an FBI identification and criminal history records check in accordance with R12-1-1927. The re-investigations shall be completed within 10 years of the date on which these elements were last completed.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1926. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1927. Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material

A. General performance objective and requirements:

1. Except for those individuals listed in R12-1-1929 and those individuals grandfathered under R12-1-1925(B), each licensee subject to the provisions of this Article shall fingerprint each individual who is to be permitted unescorted access to category 1 or category 2 quantities of

radioactive material. Licensees shall transmit all collected fingerprints to the Agency for transmission to the FBI. The licensee shall use the information received from the FBI as part of the required background investigation to determine whether to grant or deny further unescorted access to category 1 or category 2 quantities of radioactive materials for that individual.

2. The licensee shall notify each affected individual that his or her fingerprints will be used to secure a review of his or her criminal history record, and shall inform him or her of the procedures for revising the record or adding explanations to the record.
3. Fingerprinting is not required if a licensee is reinstating an individual's unescorted access authorization to category 1 or category 2 quantities of radioactive materials if:
 - a. The individual returns to the same facility that granted unescorted access authorization within 365 days of the termination of his or her unescorted access authorization; and
 - b. The previous access was terminated under favorable conditions.
4. Fingerprints do not need to be taken if an individual who is an employee of a licensee, contractor, manufacturer, or supplier has been granted unescorted access to category 1 or category 2 quantities of radioactive material, access to safeguards information, or safeguards information-modified handling by another licensee, based upon a background investigation conducted under this Article, the Fingerprint Orders, or 10 CFR part 73 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. An existing criminal history records check file may be transferred to the licensee asked to grant unescorted access in accordance with the provisions of R12-1-1931(C).
5. Licensees shall use the information obtained as part of a criminal history records check solely for the purpose of determining an individual's suitability for unescorted access authorization to category 1 or category 2 quantities of radioactive materials, access to safeguards information, or safeguards information-modified handling.

B. Prohibitions:

1. Licensees may not base a final determination to deny an individual unescorted access authorization to category 1 or category 2 quantities of radioactive material solely on the basis of information received from the FBI involving:
 - a. An arrest more than 1 year old for which there is no information of the disposition of the case; or
 - b. An arrest that resulted in dismissal of the charge or an acquittal.
2. Licensees may not use information received from a criminal history records check obtained under this section in a manner that would infringe upon the rights of any individual under the First Amendment to the Constitution of the United States, nor shall licensees use the information in any way that would discriminate among individuals on the basis of race, religion, national origin, gender, or age.

C. Procedures for processing of fingerprint checks:

1. For the purpose of complying with this Article, licensees shall use an appropriate method listed in 10 CFR 37.7 revised January 1, 2015, incorporated by reference, available under R12-1-101, and containing no future editions or amendments; to submit to the U.S. Nuclear Regulatory Commission, Director, Division of Facilities and Security, 11545 Rockville Pike, ATTN: Criminal History Program/Mail Stop TWB-05 B32M, Rockville, Maryland

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20852, one completed, legible standard fingerprint card (Form FD-258, ORIMDNRCOOOZ), electronic fingerprint scan or, where practicable, other fingerprint record for each individual requiring unescorted access to category 1 or category 2 quantities of radioactive material. Copies of these forms may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling 1-630-829-9565, or by email to FORMS.Resource@nrc.gov. Guidance on submitting electronic fingerprints can be found at <http://www.nrc.gov/site-help/e-submittals.html>.

2. Fees for the processing of fingerprint checks are due upon application. Licensees shall submit payment with the application for the processing of fingerprints through corporate check, certified check, cashier's check, money order, or electronic payment, made payable to "U.S. NRC." (For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security at 301-492-3531.) Combined payment for multiple applications is acceptable. The Commission publishes the amount of the fingerprint check application fee on the NRC's public website. (To find the current fee amount, go to the Electronic Submittals page at <http://www.nrc.gov/site-help/e-submittals.html> and see the link for the Criminal History Program under Electronic Submission Systems.)
3. The U.S. Nuclear Regulatory Commission will forward to the submitting licensee all data received from the FBI as a result of the licensee's application(s) for criminal history records checks.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1928. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1929. Relief From Fingerprinting, Identification, and Criminal History Records Checks and Other Elements of Background Investigations for Designated Categories of Individuals Permitted Unescorted Access to Certain Radioactive Materials

- A.** Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, and other elements of the background investigation are not required for the following individuals prior to granting unescorted access to category 1 or category 2 quantities of radioactive materials:
1. An employee of the U.S. Nuclear Regulatory Commission or of the Executive Branch of the U.S. Government who has undergone fingerprinting for a prior U.S. Government criminal history records check;
 2. A Member of Congress;
 3. An employee of a member of Congress or Congressional committee who has undergone fingerprinting for a prior U.S. Government criminal history records check;
 4. The Governor of a State or his or her designated State employee representative;
 5. Federal, State, or local law enforcement personnel;
 6. State Radiation Control Program Directors and State Homeland Security Advisors or their designated State employee representatives;
 7. Agreement State employees conducting security inspections on behalf of the NRC under an agreement executed under section 274.i. of the Atomic Energy Act;

8. Representatives of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement who have been certified by the NRC;
9. Emergency response personnel who are responding to an emergency;
10. Commercial vehicle drivers for road shipments of category 1 and category 2 quantities of radioactive material;
11. Package handlers at transportation facilities such as freight terminals and railroad yards;
12. Any individual who has an active Federal security clearance, provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that granted the Federal security clearance or reviewed the criminal history records check shall be provided to the licensee. The licensee shall retain this documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material; and
13. Any individual employed by a service provider licensee for which the service provider licensee has conducted the background investigation for the individual and approved the individual for unescorted access to category 1 or category 2 quantities of radioactive material. Written verification from the service provider shall be provided to the licensee. The licensee shall retain the documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

- B.** Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, are not required for an individual who has had a favorably adjudicated U.S. Government criminal history records check within the last 5 years, under a comparable U.S. Government program involving fingerprinting and an FBI identification and criminal history records check provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that reviewed the criminal history records check shall be provided to the licensee. The licensee shall retain this documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material. These programs include, but are not limited to:

1. National Agency Check;
2. Transportation Worker Identification Credentials (TWIC) under 49 CFR part 1572;
3. Bureau of Alcohol, Tobacco, Firearms, and Explosives background check and clearances under 27 CFR part 555;
4. Health and Human Services security risk assessments for possession and use of select agents and toxins under 42 CFR part 73;
5. Hazardous Material security threat assessment for hazardous material endorsement to commercial driver's license under 49 CFR part 1572; and
6. Customs and Border Protection's Free and Secure Trade (FAST) Program.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1930. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

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R12-1-1931. Protection of Information

- A. Each licensee who obtains background information on an individual under this Article shall establish and maintain a system of files and written procedures for protection of the record and the personal information from unauthorized disclosure.
- B. The licensee may not disclose the record or personal information collected and maintained to persons other than the subject individual, his or her representative, or to those who have a need to have access to the information in performing assigned duties in the process of granting or denying unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling. No individual authorized to have access to the information may disseminate the information to any other individual who does not have a need to know.
- C. The personal information obtained on an individual from a background investigation may be provided to another licensee:
 1. Upon the individual's written request to the licensee holding the data to disseminate the information contained in his or her file; and
 2. The recipient licensee verifies information such as name, date of birth, social security number, gender, and other applicable physical characteristics.
- D. The licensee shall make background investigation records obtained under this Article available for examination by an authorized representative of the Agency to determine compliance with the rules and laws.
- E. The licensee shall retain all fingerprint and criminal history records (including data indicating no record) received from the FBI, or a copy of these records if the individual's file has been transferred, on an individual for 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1932. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1933. Access Authorization Program Review

- A. Each licensee shall be responsible for the continuing effectiveness of the access authorization program. Each licensee shall ensure that access authorization programs are reviewed to confirm compliance with the requirements of this Article and that comprehensive actions are taken to correct any noncompliance that is identified. The review program shall evaluate all program performance objectives and requirements. Each licensee shall periodically (at least annually) review the access program content and implementation.
- B. The results of the reviews, along with any recommendations, shall be documented. Each review report shall identify conditions that are adverse to the proper performance of the access authorization program, the cause of the condition(s), and, when appropriate, recommend corrective actions, and corrective actions taken. The licensee shall review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.
- C. Review records shall be maintained for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1934. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1935. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1936. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1937. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1938. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1939. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1940. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1941. Security Program

- A. Applicability:
 1. Each licensee that possesses an aggregated category 1 or category 2 quantity of radioactive material shall establish, implement, and maintain a security program in accordance with the requirements of this Article.
 2. An applicant for a new license and each licensee that would become newly subject to the requirements of this Article upon application for modification of its license shall implement the requirements of this Article, as appropriate, before taking possession of an aggregated category 1 or category 2 quantity of radioactive material.
 3. Any licensee that has not previously implemented the Security Orders or been subject to the provisions of R12-1-1941 through R12-1-1957 shall provide written notification to the Agency, as specified in R12-1-1907, at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.
- B. General performance objective: Each licensee shall establish, implement, and maintain a security program that is designed to monitor and, without delay, detect, assess, and respond to an actual or attempted unauthorized access to category 1 or category 2 quantities of radioactive material.
- C. Program features: Each licensee's security program shall include the program features, as appropriate, described in R12-1-1943, R12-1-1945, R12-1-1947, R12-1-1949, R12-1-1951, R12-1-1953, and R12-1-1955.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1942. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1943. General Security Program Requirements

- A. Security plan:
 1. Each licensee identified in R12-1-1941(A) shall develop a written security plan specific to its facilities and operations. The purpose of the security plan is to establish the licensee's overall security strategy to ensure the inte-

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- grated and effective functioning of the security program required by this Article. The security plan shall, at a minimum:
- a. Describe the measures and strategies used to implement the requirements of this Article; and
 - b. Identify the security resources, equipment, and technology used to satisfy the requirements of this Article.
2. The security plan shall be reviewed and approved by the individual with overall responsibility for the security program.
 3. A licensee shall revise its security plan as necessary to ensure the effective implementation of Agency requirements. The licensee shall ensure that:
 - a. The revision has been reviewed and approved by the individual with overall responsibility for the security program; and
 - b. The affected individuals are instructed on the revised plan before the changes are implemented.
 4. The licensee shall retain a copy of the current security plan as a record for 3 years after the security plan is no longer required. If any portion of the plan is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.
- B. Implementing procedures:**
1. The licensee shall develop and maintain written procedures that document how the requirements of this Article and the security plan will be met.
 2. The implementing procedures and revisions to these procedures shall be approved in writing by the individual with overall responsibility for the security program.
 3. The licensee shall retain a copy of the current procedure as a record for 3 years after the procedure is no longer needed. Superseded portions of the procedure shall be retained for 3 years after the record is superseded.
- C. Training:**
1. Each licensee shall conduct training to ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. The training shall include instruction in:
 - a. The licensee's security program and procedures to secure category 1 or category 2 quantities of radioactive material, and in the purposes and functions of the security measures employed;
 - b. The responsibility to report promptly to the licensee any condition that causes or may cause a violation of Agency requirements;
 - c. The responsibility of the licensee to report promptly to the local law enforcement agency and licensee any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material; and
 - d. The appropriate response to security alarms.
 2. In determining those individuals who shall be trained on the security program, the licensee shall consider each individual's assigned activities during authorized use and response to potential situations involving actual or attempted theft, diversion, or sabotage of category 1 or category 2 quantities of radioactive material. The extent of the training shall be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material.
 3. Refresher training shall be provided at a frequency not to exceed 12 months and when significant changes have been made to the security program. This training shall include:
 - a. Review of the training requirements of subsection (c) and any changes made to the security program since the last training;
 - b. Reports on any relevant security issues, problems, and lessons learned;
 - c. Relevant results of Agency inspections; and
 - d. Relevant results of the licensee's program review and testing and maintenance.
 4. The licensee shall maintain records of the initial and refresher training for 3 years from the date of the training. The training records shall include dates of the training, topics covered, a list of licensee personnel in attendance, and related information.
- D. Protection of information:**
1. Licensees authorized to possess category 1 or category 2 quantities of radioactive material shall limit access to and unauthorized disclosure of their security plan, implementing procedures, and the list of individuals that have been approved for unescorted access.
 2. Efforts to limit access shall include the development, implementation, and maintenance of written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures.
 3. Before granting an individual access to the security plan or implementing procedures, licensees shall:
 - a. Evaluate an individual's need to know the security plan or implementing procedures; and
 - b. If the individual has not been authorized for unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling, the licensee shall complete a background investigation to determine the individual's trustworthiness and reliability. A trustworthiness and reliability determination shall be conducted by the reviewing official and shall include the background investigation elements contained in R12-1-1925(A)(2) through (A)(7).
 4. Licensees need not subject the following individuals to the background investigation elements for protection of information:
 - a. The categories of individuals listed in R12-1-1929(A); or
 - b. Security service provider employees, provided written verification that the employee has been determined to be trustworthy and reliable, by the required background investigation in R12-1-1925(A)(2) through (A)(7), has been provided by the security service provider.
 5. The licensee shall document the basis for concluding that an individual is trustworthy and reliable and should be granted access to the security plan or implementing procedures.
 6. Licensees shall maintain a list of persons currently approved for access to the security plan or implementing procedures. When a licensee determines that a person no longer needs access to the security plan or implementing procedures or no longer meets the access authorization requirements for access to the information, the licensee shall remove the person from the approved list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to obtain the security plan or implementing procedures.

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7. When not in use, the licensee shall store its security plan and implementing procedures in a manner to prevent unauthorized access. Information stored in non-removable electronic form shall be password protected.
8. The licensee shall retain as a record for 3 years after the document is no longer needed:
 - a. A copy of the information protection procedures; and
 - b. The list of individuals approved for access to the security plan or implementing procedures.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1944. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1945. Local Law Enforcement Agency (LLEA) Coordination

- A. A licensee subject to this Article shall coordinate, to the extent practicable, with an LLEA for responding to threats to the licensee's facility, including any necessary armed response. The information provided to the LLEA shall include:
 1. A description of the facilities and the category 1 and category 2 quantities of radioactive materials along with a description of the licensee's security measures that have been implemented to comply with this Article; and
 2. A notification that the licensee will request a timely armed response by the LLEA to any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of material.
- B. The licensee shall notify the Agency listed in R12-1-1907 of this Article within 3 business days if:
 1. The LLEA has not responded to the request for coordination within 60 days of the coordination request; or
 2. The LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities.
- C. The licensee shall document its efforts to coordinate with the LLEA. The documentation shall be kept for 3 years.
- D. The licensee shall coordinate with the LLEA at least every 12 months, or when changes to the facility design or operation adversely affect the potential vulnerability of the licensee's material to theft, sabotage, or diversion.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1946. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1947. Security Zones

- A. Licensees shall ensure that all aggregated category 1 and category 2 quantities of radioactive material are used or stored within licensee established security zones. Security zones may be permanent or temporary.
- B. Temporary security zones shall be established as necessary to meet the licensee's transitory or intermittent business activities, such as periods of maintenance, source delivery, and source replacement.
- C. Security zones shall, at a minimum, allow unescorted access only to approved individuals through:
 1. Isolation of category 1 and category 2 quantities of radioactive materials by the use of continuous physical barriers that allow access to the security zone only through established access control points. A physical barrier is a natu-

ral or man-made structure or formation sufficient for the isolation of the category 1 or category 2 quantities of radioactive material within a security zone; or

2. Direct control of the security zone by approved individuals at all times; or
 3. A combination of continuous physical barriers and direct control.
- D. For category 1 quantities of radioactive material during periods of maintenance, source receipt, preparation for shipment, installation, or source removal or exchange, the licensee shall, at a minimum, provide sufficient individuals approved for unescorted access to maintain continuous surveillance of sources in temporary security zones and in any security zone in which physical barriers or intrusion detection systems have been disabled to allow such activities.
 - E. Individuals not approved for unescorted access to category 1 or category 2 quantities of radioactive material shall be escorted by an approved individual when in a security zone.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1948. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1949. Monitoring, Detection, and Assessment

- A. Monitoring and detection:
 1. Licensees shall establish and maintain the capability to continuously monitor and detect without delay all unauthorized entries into its security zones. Licensees shall provide the means to maintain continuous monitoring and detection capability in the event of a loss of the primary power source, or provide for an alarm and response in the event of a loss of this capability to continuously monitor and detect unauthorized entries.
 2. Monitoring and detection shall be performed by:
 - a. A monitored intrusion detection system that is linked to an onsite or offsite central monitoring facility; or
 - b. Electronic devices for intrusion detection alarms that will alert nearby facility personnel; or
 - c. A monitored video surveillance system; or
 - d. Direct visual surveillance by approved individuals located within the security zone; or
 - e. Direct visual surveillance by a licensee designated individual located outside the security zone.
 3. A licensee subject to this Article shall also have a means to detect unauthorized removal of the radioactive material from the security zone. This detection capability shall provide:
 - a. For category 1 quantities of radioactive material, immediate detection of any attempted unauthorized removal of the radioactive material from the security zone. Such immediate detection capability shall be provided by:
 - i. Electronic sensors linked to an alarm; or
 - ii. Continuous monitored video surveillance; or
 - iii. Direct visual surveillance.
 - b. For category 2 quantities of radioactive material, weekly verification through physical checks, tamper indicating devices, use, or other means to ensure that the radioactive material is present.
- B. Assessment: Licensees shall immediately assess each actual or attempted unauthorized entry into the security zone to determine whether the unauthorized access was an actual or attempted theft, sabotage, or diversion.

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C. Personnel communications and data transmission: For personnel and automated or electronic systems supporting the licensee's monitoring, detection, and assessment systems, licensees shall:

1. Maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems; and
2. Provide an alternative communication capability for personnel, and an alternative data transmission and processing capability, in the event of a loss of the primary means of communication or data transmission and processing. Alternative communications and data transmission systems may not be subject to the same failure modes as the primary systems.

D. Response: Licensees shall immediately respond to any actual or attempted unauthorized access to the security zones, or actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material at licensee facilities or temporary job sites. For any unauthorized access involving an actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material, the licensee's response shall include requesting, without delay, an armed response from the LLEA.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1950. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1951. Maintenance and Testing

- A. Each licensee subject to this R12-1-1941 through R12-1-1957 shall implement a maintenance and testing program to ensure that intrusion alarms, associated communication systems, and other physical components of the systems used to secure or detect unauthorized access to radioactive material are maintained in operable condition and are capable of performing their intended function when needed. The equipment relied on to meet the security requirements of this part shall be inspected and tested for operability and performance at the manufacturer's suggested frequency. If there is no suggested manufacturer's suggested frequency, the testing shall be performed at least annually, not to exceed 12 months.
- B. The licensee shall maintain records on the maintenance and testing activities for 3 years. The record shall include:
1. The date of activity;
 2. Type of activity performed;
 3. A list of the equipment involved;
 4. The results of the activity;
 5. The name of the individual that conducted the activity;
 6. The repair or maintenance (if applicable) that was performed.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1952. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1953. Requirements for Mobile Devices

Each licensee that possesses mobile devices containing category 1 or category 2 quantities of radioactive material shall:

- A. Have two independent physical controls that form tangible barriers to secure the material from unauthorized removal

when the device is not under direct control and constant surveillance by the licensee; and

- B. For devices in or on a vehicle or trailer, unless the health and safety requirements for a site prohibit the disabling of the vehicle, the licensee shall utilize a method to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee. Licensees shall not rely on the removal of an ignition key to meet this requirement.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1954. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1955. Security Program Review

- A. Each licensee shall be responsible for the continuing effectiveness of the security program. Each licensee shall ensure that the security program is reviewed to confirm compliance with the requirements of this Article and that comprehensive actions are taken to correct any noncompliance that is identified. The review shall include the radioactive material security program content and implementation. Each licensee shall periodically (at least annually) review the security program content and implementation.
- B. The results of the review, along with any recommendations, shall be documented. Each review report shall identify conditions that are adverse to the proper performance of the security program, the cause of the condition(s), and, when appropriate, recommend corrective actions, and corrective actions taken. The licensee shall review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.
- C. The licensee shall maintain the review documentation for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1956. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1957. Reporting of Events

- A. The licensee shall immediately notify the LLEA after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of a category 1 or category 2 quantity of radioactive material. As soon as possible after initiating a response, but not at the expense of causing delay or interfering with the LLEA response to the event, the licensee shall notify the Agency. Notification shall be to a live person, a voice mail is not considered adequate notification. In no case shall the notification to the Agency be later than 4 hours after the discovery of any attempted or actual theft, sabotage, or diversion.
- B. The licensee shall assess any suspicious activity related to possible theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material and notify the LLEA as appropriate. As soon as possible but not later than 4 hours after notifying the LLEA, the licensee shall notify the Agency.
- C. The initial telephonic notification required by subsection (A) shall be followed within a period of 30 days by a written report submitted to the Agency by an appropriate method listed in R12-1-1907. The report shall include sufficient information

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for Agency analysis and evaluation, including identification of any necessary corrective actions to prevent future instances.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1958. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1959. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1960. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1961. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1962. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1963. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1964. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1965. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1966. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1967. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1968. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1969. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1970. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1971. Additional Requirements for Transfer of Category 1 and Category 2 Quantities of Radioactive Material

A licensee transferring a category 1 or category 2 quantity of radioactive material to a licensee of the Agency, NRC, or an Agreement State shall meet the license verification provisions listed below instead of those listed in sections of this chapter:

1. Any licensee transferring category 1 quantities of radioactive material to a licensee of the Agency, NRC, or an Agreement State, prior to conducting such transfer, shall verify with the Agency's license verification system or

the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred and that the licensee is authorized to receive radioactive material at the location requested for delivery. If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.

2. Any licensee transferring category 2 quantities of radioactive material to a licensee of the Agency, NRC, or an Agreement State, prior to conducting such transfer, shall verify with the Agency's license verification system or the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred. If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.
3. In an emergency where the licensee cannot reach the license issuing authority and the license verification system is nonfunctional, the licensee may accept a written certification by the transferee that it is authorized by license to receive the type, form, and quantity of radioactive material to be transferred. The certification shall include the license number, current revision number, issuing agency, expiration date, and for a category 1 shipment the authorized address. The licensee shall keep a copy of the certification. The certification shall be confirmed by use of the NRC's license verification system or by contacting the license issuing authority by the end of the next business day.
4. The transferor shall keep a copy of the verification documentation as a record for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1972. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1973. Applicability of Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Transit

- A. For shipments of category 1 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in Sections R12-1-1975(A) and (E); R12-1-1977; R12-1-1979(A)(1), (B)(1), and (C); and R12-1-1981(A), (C), (E), (G) and (H).
- B. For shipments of category 2 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in R12-1-1975(B) through (E); R12-1-1979(A)(2), (A)(3), (B)(2), and (C); and R12-1-1981(B), (D), (F), (G), and (H). For those shipments of category 2 quantities of radioactive material that meet the criteria of Article 15 of this Chapter, the shipping licensee shall also comply with the advance notification provisions of R12-1-1508 or R12-1-1512 as appropriate.
- C. The shipping licensee shall be responsible for meeting the requirements of R12-1-1971 through R12-1-1981 unless the receiving licensee has agreed in writing to arrange for the in-transit physical protection required under R12-1-1971 through R12-1-1981.
- D. Each licensee that imports or exports category 1 quantities of radioactive material shall comply with the requirements for

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physical protection during transit contained in R12-1-1975(A)(2) and (E); R12-1-1977; R12-1-1979(A)(1), (B)(1), and (C); and R12-1-1981(A), (C), (E), (G), and (H) for the domestic portion of the shipment.

- E. Each licensee that imports or exports category 2 quantities of radioactive material shall comply with the requirements for physical protection during transit contained in R12-1-1979(A)(2), (A)(3), and (B)(2); and R12-1-1981(B), (D), (F), (G), and (H) for the domestic portion of the shipment.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1974. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1975. Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material

- A. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 1 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall:
1. Preplan and coordinate shipment arrival and departure times with the receiving licensee;
 2. Preplan and coordinate shipment information with the governor or the governor's designee of any State through which the shipment will pass to:
 - a. Discuss the State's intention to provide law enforcement escorts; and
 - b. Identify safe havens; and
 3. Document the preplanning and coordination activities.
- B. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 2 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall coordinate the shipment no-later-than arrival time and the expected shipment arrival with the receiving licensee. The licensee shall document the coordination activities.
- C. Each licensee who receives a shipment of a category 2 quantity of radioactive material shall confirm receipt of the shipment with the originator. If the shipment has not arrived by the no-later-than arrival time, the receiving licensee shall notify the originator.
- D. Each licensee, who transports or plans to transport a shipment of a category 2 quantity of radioactive material, and determines that the shipment will arrive after the no-later-than arrival time provided pursuant to paragraph (B), shall promptly notify the receiving licensee of the new no-later-than arrival time.
- E. The licensee shall retain a copy of the documentation for preplanning and coordination and any revision thereof, as a record for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1976. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1977. Advance Notification of Shipment of Category 1 Quantities of Radioactive Material

As specified in subsections (A) and (B), each licensee shall provide advance notification to the Agency and the governor of a State, or the governor's designee, of the shipment of licensed material in a category 1 quantity, through or across the boundary of the State,

before the transport, or delivery to a carrier for transport of the licensed material outside the confines of the licensee's facility or other place of use or storage.

1. Procedures for submitting advance notification:
 - a. The notification shall be made to the Agency and to the office of each appropriate governor or governor's designee. The contact information, including telephone and mailing addresses, of governors and governors' designees, is available on the NRC's website at <http://nrc-stp.ornl.gov/special/designee.pdf>. A list of the contact information is also available upon request from the Director, Division of Material Safety, State, Tribal, and Rulemaking Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Notifications to the Agency shall be to the Agency Director or their designee. The notification to the Agency may be made by email to ram@azrra.gov or by fax to (602) 437-0705.
 - b. A notification delivered by mail shall be postmarked at least 7 days before transport of the shipment commences at the shipping facility.
 - c. A notification delivered by any means other than mail shall reach the Agency at least 4 days before the transport of the shipment commences and shall reach the office of the governor or the governor's designee at least 4 days before transport of a shipment within or through the State.
2. Information to be furnished in advance notification of shipment: Each advance notification of shipment of category 1 quantities of radioactive material shall contain the following information, if available at the time of notification:
 - a. The name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;
 - b. The license numbers of the shipper and receiver;
 - c. A description of the radioactive material contained in the shipment, including the radionuclides and quantity;
 - d. The point of origin of the shipment and the estimated time and date that shipment will commence;
 - e. The estimated time and date that the shipment is expected to enter each State along the route;
 - f. The estimated time and date of arrival of the shipment at the destination; and
 - g. A point of contact, with a telephone number, for current shipment information.
3. Revision notice:
 - a. The licensee shall provide any information not previously available at the time of the initial notification, as soon as the information becomes available but not later than commencement of the shipment, to the governor of the State or the governor's designee and to the Agency's Director at the contact information available in R12-1-1907.
 - b. A licensee shall promptly notify the governor of the state or the governor's designee of any changes to the information provided in accordance with subsections (B) and (C)(1). The licensee shall also immediately notify the Agency's Director at the contact information available in R12-1-1907 of any such changes.
4. Cancellation notice: Each licensee who cancels a shipment for which advance notification has been sent shall send a cancellation notice to the governor of each State or

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to the governor's designee previously notified and to the Agency's Director at the contact information available in R12-1-1907. The licensee shall send the cancellation notice before the shipment would have commenced or as soon thereafter as possible. The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being cancelled.

5. Records: The licensee shall retain a copy of the advance notification and any revision and cancellation notices as a record for 3 years.
6. Protection of information: State officials, State employees, and other individuals, whether or not licensees of the Agency, the NRC, or an Agreement State, who receive schedule information of the kind specified R12-1-1977(B) shall protect that information against unauthorized disclosure as specified in R12-1-1943(D) of this Article.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1978. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1979. Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Shipment**A. Shipments by road:**

1. Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:
 - a. Ensure that movement control centers are established that maintain position information from a remote location. These control centers shall monitor shipments 24 hours a day, 7 days a week, and have the ability to communicate immediately, in an emergency, with the appropriate law enforcement agencies.
 - b. Ensure that redundant communications are established that allow the transport to contact the escort vehicle (when used) and movement control center at all times. Redundant communications may not be subject to the same interference factors as the primary communication.
 - c. Ensure that shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center. A movement control center shall provide positive confirmation of the location, status, and control over the shipment. The movement control center shall be prepared to promptly implement preplanned procedures in response to deviations from the authorized route or a notification of actual, attempted, or suspicious activities related to the theft, loss, or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route.
 - d. Provide an individual to accompany the driver for those highway shipments with a driving time period greater than the maximum number of allowable hours of service in a 24-hour duty day as established by the Department of Transportation Federal Motor Carrier Safety Administration. The accompanying individual may be another driver.

- e. Develop written normal and contingency procedures to address:
 - i. Notifications to the communication center and law enforcement agencies;
 - ii. Communication protocols. Communication protocols shall include a strategy for the use of authentication codes and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost;
 - iii. Loss of communications; and
 - iv. Responses to an actual or attempted theft or diversion of a shipment.
- f. Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall ensure that drivers, accompanying personnel, and movement control center personnel have access to the normal and contingency procedures.

2. Each licensee that transports category 2 quantities of radioactive material shall maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance.

3. Each licensee who delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:
 - a. Use carriers that have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system shall allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.
 - b. Use carriers that maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and
 - c. Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

B. Shipments by rail:

1. Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:
 - a. Ensure that rail shipments are monitored by a telemetric position monitoring system or an alternative tracking system reporting to the licensee, third-party, or railroad communications center. The communications center shall provide positive confirmation of the location of the shipment and its status. The communications center shall implement preplanned procedures in response to deviations from the authorized route or to a notification of actual, attempted, or suspicious activities related to the theft or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route.
 - b. Ensure that periodic reports to the communications center are made at preset intervals.
2. Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:
 - a. Use carriers that have established package tracking systems. An established package tracking system is

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a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system shall allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.

- b. Use carriers that maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and
 - c. Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.
- C. Investigations: Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall immediately conduct an investigation upon the discovery that a category 1 shipment is lost or missing. Each licensee who makes arrangements for the shipment of category 2 quantities of radioactive material shall immediately conduct an investigation, in coordination with the receiving licensee, of any shipment that has not arrived by the designated no-later-than arrival time.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1980. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1981. Reporting of Events

- A. Within one hour of its determination that a shipment of category 1 quantities of radioactive material is lost or missing, a shipping licensee shall notify the appropriate LLEA and the Agency. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212. The appropriate LLEA is the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by R12-1-1979(C), the shipping licensee shall provide agreed upon updates to the Agency on the status of the investigation.
- B. Within four (4) hours of its determination that a shipment of category 2 quantities of radioactive material is lost or missing, a shipping licensee shall notify the appropriate LLEA and the Agency. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212. If, after 24 hours of its determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee shall immediately notify the Agency.
- C. The shipping licensee shall notify the designated LLEA along the shipment route as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to the theft or diversion of a shipment of a category 1 quantity of radioactive material. As soon as possible after notifying the LLEA, the licensee shall notify the Agency upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment of category 1 radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.
- D. The shipping licensee shall notify the Agency as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the

shipment, of a category 2 quantity of radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.

- E. The shipping licensee shall notify the Agency and the LLEA as soon as possible upon recovery of any lost or missing category 1 quantities of radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.
- F. The shipping licensee shall notify the Agency as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.
- G. The initial telephonic notification required by subsections (A) through (D) shall be followed within a period of 30 days by a written report submitted to the Agency by an appropriate method listed in R12-1-1907. A written report is not required for notifications on suspicious activities required by subsections (C) and (D). The report shall set forth the following information:
 1. A description of the licensed material involved, including kind, quantity, and chemical and physical form;
 2. A description of the circumstances under which the loss or theft occurred;
 3. A statement of disposition, or probable disposition, of the licensed material involved;
 4. Actions that have been taken, or will be taken, to recover the material; and
 5. Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material.
- H. Subsequent to filing the written report, the licensee shall also report any additional substantive information on the loss or theft within 30 days after the licensee learns of such information.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1982. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1983. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1984. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1985. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1986. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1987. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1988. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1989. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1990. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1991. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1992. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1993. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1994. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1995. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1996. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1997. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1998. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1999. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19100. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19101. Form of Records

Each record required by this Article shall be legible throughout the retention period specified by each Agency rule. The record may be the original or a reproduced copy or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications, shall include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19102. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19103. Record Retention

Licensees shall maintain the records that are required by the rules in this Article for the period specified by the appropriate rule. If a retention period is not otherwise specified, these records shall be retained until the Agency terminates the facility's license. All records related to this Article may be destroyed upon Agency termination of the facility's license.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19104. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19105. Inspections

- A. Each licensee shall afford to the Agency, at all reasonable times, opportunity to inspect category 1 or category 2 quantities of radioactive material and the premises and facilities wherein the nuclear material is used, produced, or stored.
- B. Each licensee shall make available to the Agency for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, use, acquisition, import, export, or transfer of category 1 or category 2 quantities of radioactive material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19106. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19107. Violations

- A. The Agency may obtain an injunction or other court order to prevent a violation of the provisions of:
 1. A.R.S. § 30-685, as amended;
 2. A.A.C. Title 12, Chapter 1; or
 3. A rule or order issued by the Agency pursuant to Statute or the rules under A.A.C. Title 12, Chapter 1.
- B. The Agency may obtain a court order for the payment of a civil penalty imposed under A.R.S. § 30-687, as amended:
 1. For violations of:
 - a. The rules in A.A.C. Title 12, Chapter 1, as amended;
 - b. Nonpayment of fees listed in A.A.C. Title 12, Chapter 1, Article 13;
 - c. Any rule, or order issued pursuant to the sections specified in subsection (B)(1)(a);
 - d. Any term, condition, or limitation of any license issued under the sections specified in subsection (B)(1)(a).
 2. For any violation for which a license may be revoked.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19108. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19109. Criminal Penalties

Arizona Revised Statutes § 30-673, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any rule issued under A.A.C. Title 12, Chapter 1.

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For purposes of this section, all the rules in this Article are issued under A.R.S. § 30-673 or the rules of the Agency.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

Appendix A. — Table 1-Category 1 and Category 2 Threshold

The terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The curie values are provided for practical usefulness only.

Radioactive Material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Americium-241	60	1,620	0.6	16.2
Americium-241/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2
Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

Note: Calculations Concerning Multiple Sources or Multiple Radionuclides

The “sum of fractions” methodology for evaluating combinations of multiple sources or multiple radionuclides is to be used in determining whether a location meets or exceeds the threshold and is thus subject to the requirements of this part.

1. If multiple sources of the same radionuclide and/or multiple radionuclides are aggregated at a location, the sum of the ratios of the total activity of each of the radionuclides shall be determined to verify whether the activity at the location is less than the category 1 or category 2 thresholds of Table 1, as appropriate. If the calculated sum of the ratios, using the equation below, is greater than or equal to 1.0, then the applicable requirements of this part apply.
2. First determine the total activity for each radionuclide from Table 1. This is done by adding the activity of each individual source, material in any device, and any loose or bulk material that contains the radionuclide. Then use the equation below to calculate the sum of the ratios by inserting the total activity of the applicable radionuclides from Table 1 in the numerator of the equation and the corresponding threshold activity from Table 1 in the denominator of the equation.

Calculations shall be performed in metric values (i.e., TBq) and the numerator and denominator values shall be in the same units.

R1 = total activity for radionuclide 1
 R2 = total activity for radionuclide 2
 RN = total activity for radionuclide n
 AR1 = activity threshold for radionuclide 1
 AR2 = activity threshold for radionuclide 2
 ARN = activity threshold for radionuclide n

$$\sum_{j=1}^n \left[\frac{R_j}{AR_j} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1.0$$

Historical Note

Appendix A, consisting of Table 1 - Category 1 and Category 2 Threshold, made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

30-654. Powers and duties of the department

A. The department may:

1. Accept grants or other contributions from the federal government or other sources, public or private, to be used by the department to carry out any of the purposes of this chapter.
2. Do all things necessary, within the limitations of this chapter, to carry out the powers and duties of the department.

3. Conduct an information program, including:

(a) Providing information on the control and regulation of sources of radiation and related health and safety matters, on request, to members of the legislature, the executive offices, state departments and agencies and county and municipal governments.

(b) Providing such published information, audiovisual presentations, exhibits and speakers on the control and regulation of sources of radiation and related health and safety matters to the state's educational system at all educational levels as may be arranged.

(c) Furnishing to citizen groups, on request, speakers and such audiovisual presentations or published materials on the control and regulation of sources of radiation and related health and safety matters as may be available.

(d) Conducting, sponsoring or cosponsoring and actively participating in the professional meetings, symposia, workshops, forums and other group informational activities concerned with the control and regulation of sources of radiation and related health and safety matters when representation from this state at such meetings is determined to be important by the department.

B. The department shall:

1. Regulate the use, storage and disposal of sources of radiation.
2. Establish procedures for purposes of selecting any proposed permanent disposal site located within this state for low-level radioactive waste.
3. Coordinate with the department of transportation and the corporation commission in regulating the transportation of sources of radiation.
4. Assume primary responsibility for and provide necessary technical assistance to handle any incidents, accidents and emergencies involving radiation or sources of radiation occurring within this state.

5. Adopt rules deemed necessary to administer this chapter in accordance with title 41, chapter 6.
6. Adopt uniform radiation protection and radiation dose standards to be as nearly as possible in conformity with, and in no case inconsistent with, the standards contained in the regulations of the United States nuclear regulatory commission and the standards of the United States public health service. In the adoption of the standards, the department shall consider the total occupational radiation exposure of individuals, including that from sources that are not regulated by the department.
7. Adopt rules for personnel monitoring under the close supervision of technically competent people in order to determine compliance with safety rules adopted under this chapter.
8. Adopt a uniform system of labels, signs and symbols and the posting of the labels, signs and symbols to be affixed to radioactive products, especially those transferred from person to person.
9. By rule, require adequate training and experience of persons utilizing sources of radiation with respect to the hazards of excessive exposure to radiation in order to protect health and safety.
10. Adopt standards for the storage of radioactive material and for security against unauthorized removal.
11. Adopt standards for the disposal of radioactive materials into the air, water and sewers and burial in the soil in accordance with 10 Code of Federal Regulations part 20.
12. Adopt rules that are applicable to the shipment of radioactive materials in conformity with and compatible with those established by the United States nuclear regulatory commission, the department of transportation, the United States treasury department and the United States postal service.
13. In individual cases, impose additional requirements to protect health and safety or grant necessary exemptions that will not jeopardize health or safety, or both.
14. Make recommendations to the governor and furnish such technical advice as required on matters relating to the utilization and regulation of sources of radiation.
15. Conduct or cause to be conducted off-site radiological environmental monitoring of the air, water and soil surrounding any fixed nuclear facility, any uranium milling and tailing site and any uranium leaching operation, and maintain and report the data or results obtained by the monitoring as deemed appropriate by the department.
16. Develop and utilize information resources concerning radiation and radioactive sources.
17. Prescribe by rule a schedule of fees to be charged to categories of licensees and registrants of radiation sources, including academic, medical, industrial, waste, distribution and imaging

categories. The fees shall cover a significant portion of the reasonable costs associated with processing the application for license or registration, renewal or amendment of the license or registration and the costs of inspecting the licensee or registrant activities and facilities, including the cost to the department of employing clerical help, consultants and persons possessing technical expertise and using analytical instrumentation and information processing systems.

18. Adopt rules establishing radiological standards, personnel standards and quality assurance programs to ensure the accuracy and safety of screening and diagnostic mammography.

C. All fees collected under subsection B, paragraph 17 of this section shall be deposited, pursuant to sections 35-146 and 35-147, in the state general fund.

36-136. Powers and duties of director; compensation of personnel; rules; definition

A. The director shall:

1. Be the executive officer of the department of health services and the state registrar of vital statistics but shall not receive compensation for services as registrar.
2. Perform all duties necessary to carry out the functions and responsibilities of the department.
3. Prescribe the organization of the department. The director shall appoint or remove personnel as necessary for the efficient work of the department and shall prescribe the duties of all personnel. The director may abolish any office or position in the department that the director believes is unnecessary.
4. Administer and enforce the laws relating to health and sanitation and the rules of the department.
5. Provide for the examination of any premises if the director has reasonable cause to believe that on the premises there exists a violation of any health law or rule of this state.
6. Exercise general supervision over all matters relating to sanitation and health throughout this state. When in the opinion of the director it is necessary or advisable, a sanitary survey of the whole or of any part of this state shall be made. The director may enter, examine and survey any source and means of water supply, sewage disposal plant, sewerage system, prison, public or private place of detention, asylum, hospital, school, public building, private institution, factory, workshop, tenement, public washroom, public restroom, public toilet and toilet facility, public eating room and restaurant, dairy, milk plant or food manufacturing or processing plant, and any premises in which the director has reason to believe there exists a violation of any health law or rule of this state that the director has the duty to administer.
7. Prepare sanitary and public health rules.

8. Perform other duties prescribed by law.

B. If the director has reasonable cause to believe that there exists a violation of any health law or rule of this state, the director may inspect any person or property in transportation through this state, and any car, boat, train, trailer, airplane or other vehicle in which that person or property is transported, and may enforce detention or disinfection as reasonably necessary for the public health if there exists a violation of any health law or rule.

C. The director, after consultation with the department of administration, may take all necessary steps to enhance the highest and best use of the state hospital property, including contracting with third parties to provide services, entering into short-term lease agreements with third parties to occupy or renovate existing buildings and entering into long-term lease agreements to develop the land and buildings. The director shall deposit any monies collected from contracts and lease agreements entered into pursuant to this subsection in the Arizona state hospital charitable trust fund established by section 36-218. At least thirty days before issuing a request for proposals pursuant to this subsection, the department of health services shall hold a public hearing to receive community and provider input regarding the highest and best use of the state hospital property related to the request for proposals. The department shall report to the joint committee on capital review on the terms, conditions and purpose of any lease or sublease agreement entered into pursuant to this subsection relating to state hospital lands or buildings or the disposition of real property pursuant to this subsection, including state hospital lands or buildings, and the fiscal impact on the department and any revenues generated by the agreement. Any lease or sublease agreement entered into pursuant to this subsection relating to state hospital lands or buildings or the disposition of real property pursuant to this subsection, including state hospital lands or buildings, must be reviewed by the joint committee on capital review.

D. The director may deputize, in writing, any qualified officer or employee in the department to do or perform on the director's behalf any act the director is by law empowered to do or charged with the responsibility of doing.

E. The director may delegate to a local health department, county environmental department or public health services district any functions, powers or duties that the director believes can be competently, efficiently and properly performed by the local health department, county environmental department or public health services district if:

1. The director or superintendent of the local health agency, environmental agency or public health services district is willing to accept the delegation and agrees to perform or exercise the functions, powers and duties conferred in accordance with the standards of performance established by the director of the department of health services.

2. Monies appropriated or otherwise made available to the department for distribution to or division among counties or public health services districts for local health work may be allocated or reallocated in a manner designed to ensure the accomplishment of recognized local public health activities and delegated functions, powers and duties in accordance with applicable standards of performance. Whenever in the director's opinion there is cause, the director may terminate all or a

part of any delegation and may reallocate all or a part of any funds that may have been conditioned on the further performance of the functions, powers or duties conferred.

F. The compensation of all personnel shall be as determined pursuant to section 38-611.

G. The director may make and amend rules necessary for the proper administration and enforcement of the laws relating to the public health.

H. Notwithstanding subsection I, paragraph 1 of this section, the director may define and prescribe emergency measures for detecting, reporting, preventing and controlling communicable or infectious diseases or conditions if the director has reasonable cause to believe that a serious threat to public health and welfare exists. Emergency measures are effective for no longer than eighteen months.

I. The director, by rule, shall:

1. Define and prescribe reasonably necessary measures for detecting, reporting, preventing and controlling communicable and preventable diseases. The rules shall declare certain diseases reportable. The rules shall prescribe measures, including isolation or quarantine, that are reasonably required to prevent the occurrence of, or to seek early detection and alleviation of, disability, insofar as possible, from communicable or preventable diseases. The rules shall include reasonably necessary measures to control animal diseases transmittable to humans.

2. Define and prescribe reasonably necessary measures, in addition to those prescribed by law, regarding the preparation, embalming, cremation, interment, disinterment and transportation of dead human bodies and the conduct of funerals, relating to and restricted to communicable diseases and regarding the removal, transportation, cremation, interment or disinterment of any dead human body.

3. Define and prescribe reasonably necessary procedures that are not inconsistent with law in regard to the use and accessibility of vital records, delayed birth registration and the completion, change and amendment of vital records.

4. Except as relating to the beneficial use of wildlife meat by public institutions and charitable organizations pursuant to title 17, prescribe reasonably necessary measures to ensure that all food or drink, including meat and meat products and milk and milk products sold at the retail level, provided for human consumption is free from unwholesome, poisonous or other foreign substances and filth, insects or disease-causing organisms. The rules shall prescribe reasonably necessary measures governing the production, processing, labeling, storing, handling, serving and transportation of these products. The rules shall prescribe minimum standards for the sanitary facilities and conditions that shall be maintained in any warehouse, restaurant or other premises, except a meat packing plant, slaughterhouse, wholesale meat processing plant, dairy product manufacturing plant or trade product manufacturing plant. The rules shall prescribe minimum standards for any truck or other vehicle in which food or drink is produced, processed, stored, handled, served or transported. The rules shall provide for the inspection and licensing of premises and vehicles so used, and for abatement as public nuisances of any premises or vehicles that do not

comply with the rules and minimum standards. The rules shall provide an exemption relating to food or drink that is:

- (a) Served at a noncommercial social event such as a potluck.
- (b) Prepared at a cooking school that is conducted in an owner-occupied home.
- (c) Not potentially hazardous and prepared in a kitchen of a private home for occasional sale or distribution for noncommercial purposes.
- (d) Prepared or served at an employee-conducted function that lasts less than four hours and is not regularly scheduled, such as an employee recognition, an employee fund-raising or an employee social event.
- (e) Offered at a child care facility and limited to commercially prepackaged food that is not potentially hazardous and whole fruits and vegetables that are washed and cut on-site for immediate consumption.
- (f) Offered at locations that sell only commercially prepackaged food or drink that is not potentially hazardous.
- (g) Baked and confectionary goods that are not potentially hazardous and that are prepared in a kitchen of a private home for commercial purposes if packaged with a label that clearly states the address of the maker, includes contact information for the maker, lists all the ingredients in the product and discloses that the product was prepared in a home. The label must be given to the final consumer of the product. If the product was made in a facility for individuals with developmental disabilities, the label must also disclose that fact. The person preparing the food or supervising the food preparation must obtain a food handler's card or certificate if one is issued by the local county and must register with an online registry established by the department pursuant to paragraph 13 of this subsection. For the purposes of this subdivision, "potentially hazardous" means baked and confectionary goods that meet the requirements of the food code published by the United States food and drug administration, as modified and incorporated by reference by the department by rule.
- (h) A whole fruit or vegetable grown in a public school garden that is washed and cut on-site for immediate consumption.

5. Prescribe reasonably necessary measures to ensure that all meat and meat products for human consumption handled at the retail level are delivered in a manner and from sources approved by the Arizona department of agriculture and are free from unwholesome, poisonous or other foreign substances and filth, insects or disease-causing organisms. The rules shall prescribe standards for sanitary facilities to be used in identity, storage, handling and sale of all meat and meat products sold at the retail level.

6. Prescribe reasonably necessary measures regarding production, processing, labeling, handling, serving and transportation of bottled water to ensure that all bottled drinking water distributed for human consumption is free from unwholesome, poisonous, deleterious or other foreign substances and filth or disease-causing organisms. The rules shall prescribe minimum standards for the sanitary facilities and conditions that shall be maintained at any source of water, bottling plant and truck or vehicle in which bottled water is produced, processed, stored or transported and shall provide for inspection and certification of bottled drinking water sources, plants, processes and transportation and for abatement as a public nuisance of any water supply, label, premises, equipment, process or vehicle that does not comply with the minimum standards. The rules shall prescribe minimum standards for bacteriological, physical and chemical quality for bottled water and for the submission of samples at intervals prescribed in the standards.

7. Define and prescribe reasonably necessary measures governing ice production, handling, storing and distribution to ensure that all ice sold or distributed for human consumption or for the preservation or storage of food for human consumption is free from unwholesome, poisonous, deleterious or other foreign substances and filth or disease-causing organisms. The rules shall prescribe minimum standards for the sanitary facilities and conditions and the quality of ice that shall be maintained at any ice plant, storage and truck or vehicle in which ice is produced, stored, handled or transported and shall provide for inspection and licensing of the premises and vehicles, and for abatement as public nuisances of ice, premises, equipment, processes or vehicles that do not comply with the minimum standards.

8. Define and prescribe reasonably necessary measures concerning sewage and excreta disposal, garbage and trash collection, storage and disposal, and water supply for recreational and summer camps, campgrounds, motels, tourist courts, trailer coach parks and hotels. The rules shall prescribe minimum standards for preparation of food in community kitchens, adequacy of excreta disposal, garbage and trash collection, storage and disposal and water supply for recreational and summer camps, campgrounds, motels, tourist courts, trailer coach parks and hotels and shall provide for inspection of these premises and for abatement as public nuisances of any premises or facilities that do not comply with the rules. Primitive camp and picnic grounds offered by this state or a political subdivision of this state are exempt from rules adopted pursuant to this paragraph but are subject to approval by a county health department under sanitary regulations adopted pursuant to section 36-183.02. Rules adopted pursuant to this paragraph do not apply to two or fewer recreational vehicles as defined in section 33-2102 that are not park models or park trailers, that are parked on owner-occupied residential property for less than sixty days and for which no rent or other compensation is paid. For the purposes of this paragraph, "primitive camp and picnic grounds" means camp and picnic grounds that are remote in nature and without accessibility to public infrastructure such as water, electricity and sewer.

9. Define and prescribe reasonably necessary measures concerning the sewage and excreta disposal, garbage and trash collection, storage and disposal, water supply and food preparation of all public schools. The rules shall prescribe minimum standards for sanitary conditions that shall be maintained in any public school and shall provide for inspection of these premises and facilities and for abatement as public nuisances of any premises that do not comply with the minimum standards.

10. Prescribe reasonably necessary measures to prevent pollution of water used in public or semipublic swimming pools and bathing places and to prevent deleterious health conditions at these places. The rules shall prescribe minimum standards for sanitary conditions that shall be maintained at any public or semipublic swimming pool or bathing place and shall provide for inspection of these premises and for abatement as public nuisances of any premises and facilities that do not comply with the minimum standards. The rules shall be developed in cooperation with the director of the department of environmental quality and shall be consistent with the rules adopted by the director of the department of environmental quality pursuant to section 49-104, subsection B, paragraph 12.

11. Prescribe reasonably necessary measures to keep confidential information relating to diagnostic findings and treatment of patients, as well as information relating to contacts, suspects and associates of communicable disease patients. In no event shall confidential information be made available for political or commercial purposes.

12. Prescribe reasonably necessary measures regarding human immunodeficiency virus testing as a means to control the transmission of that virus, including the designation of anonymous test sites as dictated by current epidemiologic and scientific evidence.

13. Establish an online registry of food preparers that are authorized to prepare food for commercial purposes pursuant to paragraph 4 of this subsection.

14. Prescribe an exclusion for fetal demise cases from the standardized survey known as "the hospital consumer assessment of healthcare providers and systems".

J. The rules adopted under the authority conferred by this section shall be observed throughout the state and shall be enforced by each local board of health or public health services district, but this section does not limit the right of any local board of health or county board of supervisors to adopt ordinances and rules as authorized by law within its jurisdiction, provided that the ordinances and rules do not conflict with state law and are equal to or more restrictive than the rules of the director.

K. The powers and duties prescribed by this section do not apply in instances in which regulatory powers and duties relating to public health are vested by the legislature in any other state board, commission, agency or instrumentality, except that with regard to the regulation of meat and meat products, the department of health services and the Arizona department of agriculture within the area delegated to each shall adopt rules that are not in conflict.

L. The director, in establishing fees authorized by this section, shall comply with title 41, chapter 6. The department shall not set a fee at more than the department's cost of providing the service for which the fee is charged. State agencies are exempt from all fees imposed pursuant to this section.

M. After consultation with the state superintendent of public instruction, the director shall prescribe the criteria the department shall use in deciding whether or not to notify a local school district that a pupil in the district has tested positive for the human immunodeficiency virus antibody. The director shall prescribe the procedure by which the department shall notify a school district if, pursuant to these criteria, the department determines that notification is warranted in a particular situation. This

procedure shall include a requirement that before notification the department shall determine to its satisfaction that the district has an appropriate policy relating to nondiscrimination of the infected pupil and confidentiality of test results and that proper educational counseling has been or will be provided to staff and pupils.

N. Until the department adopts exemptions by rule as required by subsection I, paragraph 4, subdivision (f) of this section, food and drink are exempt from the rules prescribed in subsection I of this section if offered at locations that sell only commercially prepackaged food or drink that is not potentially hazardous, without a limitation on its display area.

O. Until the department adopts exemptions by rule as required by subsection I, paragraph 4, subdivision (h) of this section, a whole fruit or vegetable grown in a public school garden that is washed and cut on-site for immediate consumption is exempt from the rules prescribed in subsection I of this section.

P. Until the department adopts an exclusion by rule as required by subsection I, paragraph 14 of this section, the standardized survey known as "the hospital consumer assessment of healthcare providers and systems" may not include patients who experience a fetal demise.

Q. For the purposes of this section, "fetal demise" means a fetal death that occurs or is confirmed in a licensed hospital. Fetal demise does not include an abortion as defined in section 36-2151.

30-656. Authority for governor to enter into agreements with federal government; effect on federal licenses

A. The governor, on behalf of this state, may enter into agreements with the federal government providing for discontinuance of certain of the federal government's responsibilities with respect to sources of radiation and the assumption of the responsibilities by this state.

B. Any person that, on the effective date of an agreement entered into under subsection A of this section, possesses a license issued by the federal government shall be deemed to possess a like license issued under this chapter, which shall expire either ninety days after receipt from the department of a notice of expiration of the license or on the date of expiration specified in the federal license, whichever is earlier.

30-657. Records

A. Each person that possesses or uses a source of radiation shall maintain records relating to its receipt, storage, transfer or disposal and such other records as the department requires by rule.

B. The department shall require each person that possesses or uses a source of radiation to maintain appropriate records showing the radiation exposure of all individuals for whom personnel

monitoring is required by rules adopted by the department. Copies of records required by this section shall be submitted to the department on request by the department.

C. Any person that possesses or uses a source of radiation shall furnish to each employee for whom personnel monitoring is required a copy of the employee's personal exposure record at such times as prescribed by rules adopted by the department.

D. Any person that possesses or uses a source of radiation, when requested, shall submit to the department copies of records or reports submitted to the United States nuclear regulatory commission regardless of whether the person is subject to regulation by the department. The department, by rule, shall specify the records or reports required to be submitted to the department under this subsection.

30-671. Radiation protection standards

A. Radiation protection standards in rules adopted by the department under this chapter do not limit the kind or amount of radiation that may be intentionally applied to a person or animal for diagnostic or therapeutic purposes by or under the direction of a licensed practitioner of the healing arts.

B. Radiation sources shall be registered, licensed or exempted at the discretion of the department and shall be available for inspection as specified in this chapter or rules adopted under this chapter.

30-672. Licensing and registration of sources of radiation; exemptions

A. The agency by rule shall provide for general or specific licensing of by-product, source, special nuclear materials or devices or equipment utilizing such materials. The rules shall provide for amendment, suspension or revocation of the licenses. The agency shall require from the applicant satisfactory evidence that the applicant is using methods and techniques that are demonstrated to be safe and that the applicant is familiar with the rules adopted by the agency under section 30-654, subsection B, paragraph 5 relative to uniform radiation standards, total occupational radiation exposure norms, labels, signs and symbols, storage, waste disposal and shipment of radioactive materials. The agency may require that before the agency issues a license the employees or other personnel of an applicant who may deal with sources of radiation receive a course of instruction approved by the agency concerning agency rules. The agency shall require that the applicant's proposed equipment and facilities be adequate to protect health and safety and that the applicant's proposed administrative controls over the use of the sources of radiation requested be adequate to protect health and safety.

B. The agency may require registration or licensing of other sources of radiation if it has been determined necessary to protect public health or safety.

C. The agency may exempt certain sources of radiation or kinds of uses or users from the licensing or registration requirements set forth in this section when it finds that the exemption of such sources

of radiation or kinds of uses or users will not constitute a significant risk to the health and safety of the public.

D. The agency shall not require persons licensed in this state to practice as a dentist, physician assistant, chiropractor or veterinarian or licensed in this state to practice medicine, surgery, osteopathy, chiropractic or naturopathic medicine to obtain any other license for the use of a diagnostic x-ray machine, but these persons are governed by their own licensing acts.

E. Persons licensed by the federal communications commission with respect to the activities for which they are licensed by that commission are exempted from this chapter.

F. Rules adopted pursuant to this chapter may provide for recognition of other state or federal licenses as the agency deems desirable, subject to such registration requirements as the agency prescribes.

G. Any licenses issued by the agency shall state the nature, use and extent of use of the source of radiation. If at any time subsequent to the issuance of a license the licensee desires any change in the nature, use or extent, the licensee shall seek an amendment or a new license under this section.

H. The agency shall prescribe by rule requirements for financial security as a condition for licensure under this article. The agency shall deposit all amounts posted, paid or forfeited as financial security into the radiation regulatory and perpetual care fund under section 30-694.

I. Persons applying for licensure shall provide notice to the city or town where the applicant proposes to operate as part of the application process.

J. Any facility that provides diagnostic or screening mammography examinations by or under the direction of a person exempted from further licensure under subsection D of this section shall obtain certification by the agency. The agency shall prescribe by rule the requirements of certification in order to ensure the accuracy and safety of diagnostic and screening mammography.

30-672.01. Registration of persons who install or service radiation machines; exception; roster

A. A person who is in the business of installing or servicing radiation machines which are defined in section 30-651 and which are required to be registered by the agency shall register with the agency on a form provided by the agency.

B. Notwithstanding subsection A, a person who is subject to the jurisdiction of the medical radiologic technology board of examiners and is engaged in operation of a radiation machine shall not be required to register with the agency.

C. The registration form required pursuant to subsection A shall be limited to the following information:

1. The full business name of the registrant.
2. The names of the owners if the registrant is a corporation or partnership.
3. The names of employees who carry out installation or service work for the registrant.
4. The business address of the registrant.

D. The agency shall maintain a roster of all registrants, including the date of initial registration. The roster shall be available for public inspection.

E. A registrant must reregister with the agency whenever there is a change in the information provided under subsection C.

30-681. Inspection

The department or its duly authorized representatives may enter at all reasonable times on any private or public property for the purpose of determining whether there is compliance with or a violation of this chapter and rules adopted under this chapter, except that entry into areas under the jurisdiction of the federal government shall be effected only with the concurrence of the federal government or its duly designated representative.

30-682. Authority to impound materials

In the event of an emergency, the department may impound or order the impounding of sources of radiation in the possession of any person that is not equipped to comply with or fails to comply with this chapter or any rule adopted under this chapter.

30-683. Intergovernmental agreements; inspections; training programs; mammography facilities

A. The department, subject to the approval of the governor, may enter into agreements with the federal government, other states or interstate agencies to perform on a cooperative basis with the federal government, other states or interstate agencies inspections or other functions relating to control of sources of radiation.

B. The department may institute training programs for the purpose of qualifying personnel to carry out this chapter and make such personnel available for participation in any program of the federal government, other states or interstate agencies in furtherance of the purposes of this chapter.

C. The department shall annually inspect facilities that provide diagnostic or screening mammography examinations.

30-684. Conflicting ordinances by municipality or county

Ordinances, resolutions or regulations, now or hereafter in effect, of the governing body of a municipality or county or board of health relating to sources of radiation shall not be superseded by this chapter, provided, such ordinances or regulations are and continue to be consistent with the provisions of this chapter, amendments thereto and rules and regulations thereunder.

30-685. Injunction proceedings

If the department finds that any person has engaged in or is about to engage in any act or practice that constitutes or will constitute a violation of any provision of this chapter or any rule or order issued under this chapter, the attorney general, on request by the department, may apply to the appropriate court for an order enjoining such acts or practices or for an order directing compliance. On a showing by the department that the person has engaged or is about to engage in any such act or practice, a permanent or temporary injunction, restraining order or other order may be granted.

30-686. Administrative procedure and judicial review

A. Except as otherwise provided in section 30-688, the department shall afford an opportunity for a hearing on the record on the request of any person whose interest may be affected by article 2 of this chapter, or by the proceeding under title 41, chapter 6, article 10, and shall admit any interested person as a party to the proceeding for:

1. Issuing or modifying rules relating to control of sources of radiation.
2. Granting licenses.
3. Determining compliance with or granting exceptions from rules of the department.

B. Except as provided in section 41-1092.08, subsection H, any final order entered in any proceeding under subsection A of this section is subject to judicial review in the manner prescribed in title 12, chapter 7, article 6.

30-687. Routine enforcement actions; civil penalty

A. A person that violates this chapter or any rule adopted under this chapter or any license requirement is subject to a civil penalty imposed by the department. The department shall issue a notice of violation to the violator and may hold a hearing before assessing a civil penalty. The department, in lieu of imposing a civil penalty, may prescribe a time for elimination of the violation and assessment of a civil penalty if the violation is not eliminated within the time prescribed by the order. The attorney general shall bring actions to collect a civil penalty assessed under this subsection.

B. The department, by rule, shall establish a schedule of civil penalties based on factors such as the nature of the violation, the number of previous violations and whether the violation was of a serious nature.

C. The department may impose a civil penalty of not more than five thousand dollars for each violation for each day up to a maximum of twenty-five thousand dollars for any thirty-day period.

D. A final order of the department under this section is subject to appeal to the radiation regulatory hearing board.

30-688. Escalated enforcement action; orders; hearings; appeals

A. To enforce this chapter, the department, by rule, shall prescribe procedures for implementing an escalated enforcement action. An escalated enforcement action may include actions such as an informal hearing, impounding of radiation sources, assessment of civil penalties, an order modifying, suspending or revoking a license issued under this chapter or recommending prosecution of a criminal action.

B. The director, as part of an escalated enforcement action, may issue an order providing for an immediate suspension of a license issued under this section without notice or hearing if the director determines that a potential threat to the public health and safety exists.

C. The board shall conduct a hearing within ten days after the date of the director's order unless the person against whom the order is directed waives the right to a hearing within ten days. If the ten-day hearing requirement is waived, the board shall set the date for a hearing on the director's order within thirty days after the date of the order or within a time mutually agreeable to the interested parties. The purpose of the hearing is to review the decision of the director to issue the order. The board shall make findings of fact and may continue, suspend or modify the director's order.

D. The board shall not waive the ten-day hearing requirement for any reason other than at the request of the person against whom the order was directed.

30-689. Violation; classification

A. Any person who violates any provision of this chapter or any rule, regulation or order placed in effect pursuant thereto by the commission is guilty of a class 2 misdemeanor.

B. The provisions of subsection A shall not apply to any emergency regulation or order unless or until the person so violating such regulation or order has had actual knowledge of the regulation or order.

30-721. Adoption and text of compact

The southwestern low-level radioactive waste disposal compact is adopted and enacted into law as follows:

Article 1.

Compact Policy and Formation

The party states hereby find and declare all of the following:

(A) The United States Congress, by enacting the low-level radioactive waste policy act, Public Law 96-573, as amended by the low-level radioactive waste policy amendments act of 1985 (42 U.S.C. sec. 2021b to 2021j, incl.), has encouraged the use of interstate compacts to provide for the establishment and operation of facilities for regional management of low-level radioactive waste.

(B) It is the purpose of this compact to provide the means for such a cooperative effort between or among party states to protect the citizens of the states and the states' environments.

(C) It is the policy of party states to this compact to encourage the reduction of the volume of low-level radioactive waste requiring disposal within the compact region.

(D) It is the policy of the party states that the protection of the health and safety of their citizens and the most ecological and economical management of low-level radioactive wastes can be accomplished through cooperation of the states by minimizing the amount of handling and transportation required to dispose of these wastes and by providing facilities that serve the compact region.

(E) Each party state, if an agreement state pursuant to section 2021 of title 42 of the United States Code, or the nuclear regulatory commission if not an agreement state, is responsible for the primary regulation of radioactive materials within its jurisdiction.

Article 2.

Definitions

As used in this compact, unless the context clearly indicates otherwise, the following definitions apply:

(A) "Commission" means the southwestern low-level radioactive waste commission established in article 3 of this compact.

(B) "Compact region" or "region" means the combined geographical area within the boundaries of the party states.

(C) "Disposal" means the permanent isolation of low-level radioactive waste pursuant to requirements established by the nuclear regulatory commission and the environmental protection agency under applicable laws, or by a party state if that state hosts a disposal facility.

(D) "Generate," when used in relation to low-level radioactive waste, means to produce low-level radioactive waste.

(E) "Generator" means a person whose activity, excluding the management of low-level radioactive waste, results in the production of low-level radioactive waste.

(F) "Host county" means a county, or other similar political subdivision of a party state, in which a regional disposal facility is located or being developed.

(G) "Host state" means a party state in which a regional disposal facility is located or being developed. The state of California is the host state under this compact for the first thirty years from the date the California regional disposal facility commences operations.

(H) "Institutional control period" means that period of time in which the facility license is transferred to the disposal site owner in compliance with the appropriate regulations for long-term observation and maintenance following the postclosure period.

(I) "Low-level radioactive waste" means regulated radioactive material that meets all of the following requirements:

(1) The waste is not high-level radioactive waste, spent nuclear fuel, or by-product material (as defined in section 11e(2) of the atomic energy act of 1954 (42 U.S.C. sec. 2014(e) (2))).

(2) The waste is not uranium mining or mill tailings.

(3) The waste is not any waste for which the federal government is responsible pursuant to subdivision (b) of section 3 of the low-level radioactive waste policy amendments act of 1985 (42 U.S.C. sec. 2021c(b)).

(4) The waste is not an alpha emitting transuranic nuclide with a half-life greater than five years and with a concentration greater than one hundred nanocuries per gram, or plutonium-241 with a concentration greater than three thousand five hundred nanocuries per gram, or curium-242 with a concentration greater than twenty thousand nanocuries per gram.

(J) "Management" means collection, consolidation, storage, packaging, or treatment.

(K) "Major generator state" means a party state which generates ten per cent of the total amount of low-level radioactive waste produced within the compact region and disposed of at the regional disposal facility. If no party state other than California generates at least ten per cent of the total

amount, "major generator state" means the party state which is second to California in the amount of waste produced within the compact region and disposed of at the regional disposal facility.

(L) "Operator" means a person who operates a regional disposal facility.

(M) "Party state" means any state that has become a party in accordance with article 7 of this compact.

(N) "Person" means an individual, corporation, partnership, or other legal entity, whether public or private.

(O) "Postclosure period" means that period of time after completion of closure of a disposal facility during which the licensee shall observe, monitor, and carry out necessary maintenance and repairs at the disposal facility to assure that the disposal facility will remain stable and will not need ongoing active maintenance. This period ends with the beginning of the institutional control period.

(P) "Regional disposal facility" means a nonfederal low-level radioactive waste disposal facility established and operated under this compact.

(Q) "Site closure and stabilization" means the activities of the disposal facility operator taken at the end of the disposal facility's operating life to assure the continued protection of the public from any residual radioactive or other potential hazards present at the disposal facility.

(R) "Transporter" means a person who transports low-level radioactive waste.

(S) "Uranium mine and mill tailings" means waste resulting from mining and processing of ores containing uranium.

Article 3.

The Commission

(A) There is hereby established the southwestern low-level radioactive waste commission.

(1) The commission shall consist of one voting member from each party state to be appointed by the governor, confirmed by the senate of that party state, and to serve at the pleasure of the governor of each party state, and one voting member from the host county. The appointing authority of each party state shall notify the commission in writing of the identity of the member and of any alternates. An alternate may act in the member's absence.

(2) The host state shall also appoint that number of additional voting members of the commission which is necessary for the host state's members to compose at least fifty-one per cent of the membership on the commission. The host state's additional members shall be appointed by the host state governor and confirmed by the host state senate. If there is more than one host state, only the

state in which is located the regional disposal facility actively accepting low-level radioactive waste pursuant to this compact may appoint these additional members.

(3) If the host county has not been selected at the time the commission is appointed, the governor of the host state shall appoint an interim local government member, who shall be an elected representative of a local government. After a host county is selected, the interim local government member shall resign and the governor shall appoint the host county member pursuant to paragraph (4).

(4) The governor shall appoint the host county member from a list of at least seven candidates compiled by the board of supervisors of the host county.

(5) In recommending and appointing the host county member pursuant to paragraph (4), the board of supervisors and the governor shall give first consideration to recommending and appointing the member of the board of supervisors in whose district the regional disposal facility is located or being developed. If the board of supervisors of the host county does not provide a list to the governor of at least seven candidates from which to choose, the governor shall appoint a resident of the host county as the host county member.

(6) The host county member is subject to confirmation by the senate of that party state and shall serve at the pleasure of the governor of the host state.

(B) The commission is a legal entity separate and distinct from the party states and shall be so liable for its actions. Members of the commission shall not be personally liable for actions taken in their official capacity. The liabilities of the commission shall not be deemed liabilities of the party states.

(C) The commission shall conduct its business affairs pursuant to the laws of the host state and disputes arising out of commission action shall be governed by the laws of the host state. The commission shall be located in the capital city of the host state in which the regional disposal facility is located.

(D) The commission's records shall be subject to the host state's public records law, and the meetings of the commission shall be open and public in accordance with the host state's open meeting law.

(E) The commission members are public officials of the appointing state and shall be subject to the conflict of interest laws, as well as any other law, of the appointing state. The commission members shall be compensated according to the appointing state's law.

(F) Each commission member is entitled to one vote. A majority of the commission constitutes a quorum. Unless otherwise provided in this compact, a majority of the total number of votes on the commission is necessary for the commission to take any action.

(G) The commission has all of the following duties and authority:

(1) The commission shall do, pursuant to the authority granted by this compact, whatever is reasonably necessary to ensure that low-level radioactive wastes are safely disposed of and managed within the region.

(2) The commission shall meet at least once a year and otherwise as business requires.

(3) The commission shall establish a compact surcharge to be imposed upon party state generators. The surcharge shall be based upon the cubic feet of low-level radioactive waste and the radioactivity of the low-level radioactive waste and shall be collected by the operator of the disposal facility. The host state shall set, and the commission shall impose, the surcharge after congressional approval of the compact. The amount of the surcharge shall be sufficient to establish and maintain at a reasonable level funds for all of the following purposes:

(a) The activities of the commission and commission staff.

(b) At the discretion of the host state, a third-party liability fund to provide compensation for injury to persons or property during the operational, closure, stabilization, and postclosure and institutional control periods of the regional disposal facility. This subparagraph does not limit the responsibility or liability of the operator, who shall comply with any federal or host state statutes or regulations regarding third-party liability claims.

(c) A local government reimbursement fund, for the purpose of reimbursing the local government entity or entities hosting the regional disposal facility for any costs or increased burdens on the local governmental entity for services, including, but not limited to, general fund expenses, the improvement and maintenance of roads and bridges, fire protection, law enforcement, monitoring by local health officials, and emergency preparation and response related to the hosting of the regional disposal facility.

(4) The surcharges imposed by the commission for purposes of subparagraphs (b) and (c) of paragraph (3) and surcharges pursuant to paragraph (3) of subdivision (E) of article 4 shall be transmitted on a monthly basis to the host state for distribution to the proper accounts.

(5) The commission shall establish a fiscal year which conforms to the fiscal years of the party states to the extent possible.

(6) The commission shall keep an accurate account of all receipts and disbursements. An annual audit of the books of the commission shall be conducted by an independent certified public accountant, and the audit report shall be made a part of the annual report of the commission.

(7) The commission shall prepare and include in the annual report a budget showing anticipated receipts and disbursements for the subsequent fiscal year.

(8) The commission may accept any grants, equipment, supplies, materials, or services, conditional or otherwise, from the federal or state government. The nature, amount and condition, if any, of any donation, grant, or other resources accepted pursuant to this paragraph and the identity of the donor or grantor shall be detailed in the annual report of the commission. However, the host state shall receive, for the uses specified in subparagraph (E) of paragraph (2) of subsection (d) of section 2021e of title 42 of the United States Code, any payments paid from the special escrow account for which the secretary of energy is trustee pursuant to subparagraph (A) of paragraph (2) of subsection (d) of section 2021e of title 42 of the United States Code.

(9) The commission shall submit communications to the governors and to the presiding officers of the legislatures of the party states regarding the activities of the commission, including an annual report to be submitted on or before January 15 of each year. The commission shall include in the annual report a review of, and recommendations for, low-level radioactive waste disposal methods which are alternative technologies to the shallow land burial of low-level radioactive waste.

(10) The commission shall assemble and make available to the party states, and to the public, information concerning low-level radioactive waste management needs, technologies, and problems.

(11) The commission shall keep a current inventory of all generators within the region, based upon information provided by the party states.

(12) The commission shall keep a current inventory of all regional disposal facilities, including information on the size, capacity, location, specific low-level radioactive wastes capable of being managed, and the projected useful life of each regional disposal facility.

(13) The commission may establish advisory committees for the purpose of advising the commission on the disposal and management of low-level radioactive waste.

(14) The commission may enter into contracts to carry out its duties and authority, subject to projected resources. No contract made by the commission shall bind a party state.

(15) The commission shall prepare contingency plans, with the cooperation and approval of the host state, for the disposal and management of low-level radioactive waste in the event that any regional disposal facility should be closed.

(16) The commission may sue and be sued and, when authorized by a majority vote of the members, may seek to intervene in an administrative or judicial proceeding related to this compact.

(17) The commission shall be managed by an appropriate staff, including an executive director. Notwithstanding any other provision of law, the commission may hire or retain, or both, legal counsel.

(18) The commission may, subject to applicable federal and state laws, recommend to the appropriate host state authority suitable land and rail transportation routes for low-level radioactive waste carriers.

(19) The commission may enter into an agreement to import low-level radioactive waste into the region only if both of the following requirements are met:

(a) The commission approves the importation agreement by a two-thirds vote of the commission.

(b) The commission and the host state assess the affected regional disposal facilities' capability to handle imported low-level radioactive wastes and any relevant environmental or economic factors, as defined by the host state's appropriate regulatory authorities.

(20) The commission may, upon petition, allow an individual generator, a group of generators, or the host state of the compact, to export low-level radioactive wastes to a low-level radioactive waste disposal facility located outside the region. The commission may approve the petition only by a two-thirds vote of the commission. The permission to export low-level radioactive wastes shall be effective for that period of time and for the amount of low-level radioactive waste, and subject to any other term or condition, which may be determined by the commission.

(21) The commission may approve, only by a two-thirds vote of the commission, the exportation outside the region of material, which otherwise meets the criteria of low-level radioactive waste, if the sole purpose of the exportation is to process the material for recycling.

(22) The commission shall, not later than ten years before the closure of the initial or subsequent regional disposal facility, prepare a plan for the establishment of the next regional disposal facility.

Article 4.

Rights, Responsibilities, and Obligations of Party States

(A) There shall be regional disposal facilities sufficient to dispose of the low-level radioactive waste generated within the region.

(B) Low-level radioactive waste generated within the region shall be disposed of at regional disposal facilities and each party state shall have access to any regional disposal facility without discrimination.

(C) (1) Upon the effective date of this compact, the state of California shall serve as the host state and shall comply with the requirements of subdivision (E) for at least thirty years from the date the regional disposal facility begins to accept low-level radioactive waste for disposal. The extension of the obligation and duration shall be at the option of the state of California. If the state of California does not extend this obligation, the party state, other than the state of California, which is the largest major generator state shall then serve as the host state for the second regional disposal facility. The

obligation of a host state which hosts the second regional disposal facility shall also run for thirty years from the date the second regional disposal facility begins operations.

(2) The host state may close its regional disposal facility when necessary for public health or safety.

(D) The party states of this compact cannot be members of another regional low-level radioactive waste compact entered into pursuant to the low-level radioactive waste policy act, as amended by the low-level radioactive waste policy amendments act of 1985 (42 U.S.C. secs. 2021b to 2021j, incl.).

(E) A host state shall do all of the following:

(1) Cause a regional disposal facility to be developed on a timely basis.

(2) Ensure by law, consistent with any applicable federal laws, the protection and preservation of public health and safety in the siting, design, development, licensing, regulation, operation, closure, decommissioning, and long-term care of the regional disposal facilities within the state.

(3) Ensure that charges for disposal of low-level radioactive waste at the regional disposal facility are reasonably sufficient to do all of the following:

(a) Ensure the safe disposal of low-level radioactive waste and long-term care of the regional disposal facility.

(b) Pay for the cost of inspection, enforcement, and surveillance activities at the regional disposal facility.

(c) Assure that charges are assessed without discrimination as to the party state of origin.

(4) Submit an annual report to the commission on the status of the regional disposal facility including projections of the facility's anticipated future capacity.

(5) The host state and the operator shall notify the commission immediately upon the occurrence of any event which could cause a possible temporary or permanent closure of a regional disposal facility.

(F) Each party state is subject to the following duties and authority:

(1) To the extent authorized by federal law, each party state shall develop and enforce procedures requiring low-level radioactive waste shipments originating within its borders and destined for a regional disposal facility to conform to packaging and transportation requirements and regulations. These procedures shall include, but are not limited to, all of the following requirements:

(a) Periodic inspections of packaging and shipping practices.

(b) Periodic inspections of low-level radioactive waste containers while in the custody of transporters.

(c) Appropriate enforcement actions with respect to violations.

(2) A party state may impose a surcharge on the low-level radioactive waste generators within the state to pay for activities required by paragraph (1).

(3) To the extent authorized by federal law, each party state shall, after receiving notification from a host state that a person in a party state has violated packaging, shipping, or transportation requirements or regulations, take appropriate actions to ensure that these violations do not continue. Appropriate actions may include, but are not limited to, requiring that a bond be posted by the violator to pay the cost of repackaging at the regional disposal facility and prohibit future shipments to the regional disposal facility.

(4) Each party state shall maintain a registry of all generators within the state that may have low-level radioactive waste to be disposed of at a regional disposal facility, including, but not limited to, the amount of low-level radioactive waste and the class of low-level radioactive waste generated by each generator.

(5) Each party state shall encourage generators within its borders to minimize the volume of low-level radioactive waste requiring disposal.

(6) Each party state may rely on the good faith performance of the other party states to perform those acts which are required by this compact to provide regional disposal facilities, including the use of the regional disposal facilities in a manner consistent with this compact.

(7) Each party state shall provide the commission with any data and information necessary for the implementation of the commission's responsibilities, including taking those actions necessary to obtain this data or information.

(8) Each party state shall agree that only low-level radioactive waste generated within the jurisdiction of the party states shall be disposed of in the regional disposal facility, except as provided in paragraph (19) of subdivision (G) of article 3.

(9) Each party state shall agree that if there is any injury to persons or property resulting from the operation of a regional disposal facility, the damages resulting from the injury may be paid from the third-party liability fund pursuant to subparagraph (b) of paragraph (3) of subdivision (G) of article 3, only to the extent that the damages exceed the limits of liability insurance carried by the operator. No party state, by joining this compact, assumes any liability resulting from the siting, operation,

maintenance, long-term care, or other activity relating to a regional facility, and no party state shall be liable for any harm or damage resulting from a regional facility not located within the state.

Article 5.

Approval of Regional Facilities

A regional disposal facility shall be approved by the host state in accordance with its laws. This compact does not confer any authority on the commission regarding the siting, design, development, licensure, or other regulation, or the operation, closure, decommissioning, or long-term care of, any regional disposal facility within a party state.

Article 6.

Prohibited Acts and Penalties

(A) No person shall dispose of low-level radioactive waste within the region unless the disposal is at a regional disposal facility, except as otherwise provided in paragraphs (20) and (21) of subdivision (G) of article 3.

(B) No person shall dispose of or manage any low-level radioactive waste within the region unless the low-level radioactive waste was generated within the region, except as provided in paragraphs (19), (20), and (21) of subdivision (G) of article 3.

(C) Violations of this section shall be reported to the appropriate law enforcement agency within the party state's jurisdiction.

(D) Violations of this section may result in prohibiting the violator from disposing of low-level radioactive waste in the regional disposal facility, as determined by the commission or the host state.

Article 7.

Eligibility, Entry into Effect, Congressional Consent, Withdrawal, Exclusion

(A) The states of Arizona, North Dakota, South Dakota, and California are eligible to become parties to this compact. Any other state may be made eligible by a majority vote of the commission and ratification by the legislatures of all of the party states by statute, and upon compliance with those terms and conditions for eligibility which the host state may establish. The host state may establish all terms and conditions for the entry of any state, other than the states named in this subparagraph, as a member of this compact.

(B) Upon compliance with the other provisions of this compact, an eligible state may become a party state by legislative enactment of this compact or by executive order of the governor of the state adopting this compact. A state becoming a party state by executive order shall cease to be a party

state upon adjournment of the first general session of its legislature convened after the executive order is issued, unless before the adjournment the legislature enacts this compact.

(C) A party state, other than the host state, may withdraw from the compact by repealing the enactment of this compact, but this withdrawal shall not become effective until two years after the effective date of the repealing legislation. If a party state which is a major generator of low-level radioactive waste voluntarily withdraws from the compact pursuant to this subdivision, that state shall make arrangements for the disposal of the other party states' low-level radioactive waste for a time period equal the period of time it was a member of this compact. If the host state withdraws from the compact, the withdrawal shall not become effective until five years after the effective date of the repealing legislation.

(D) A party state may be excluded from this compact by a two-thirds vote of the commission members, acting in a meeting, if the state to be excluded has failed to carry out any obligations required by compact.

(E) This compact shall take effect upon the enactment by statute by the legislatures of the state of California and at least one other eligible state and upon the consent of Congress and shall remain in effect until otherwise provided by federal law. This compact is subject to review by Congress and the withdrawal of the consent of Congress every five years after its effective date, pursuant to federal law.

Article 8.

Construction and Severability

(A) The provisions of this compact shall be broadly construed to carry out the purposes of the compact, but the sovereign powers of a party state shall not be infringed unnecessarily.

(B) This compact does not affect any judicial proceeding pending on the effective date of this compact.

(C) If any provision of this compact or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of the compact which can be given effect without the invalid provision or application, and to this end the provisions of this compact are severable.

(D) Nothing in this compact diminishes or otherwise impairs the jurisdiction, authority, or discretion of either of the following:

(1) The nuclear regulatory commission pursuant to the atomic energy act of 1954, as amended (42 U.S.C. sec. 2011 et seq.).

(2) An agreement state under section 274 of the atomic energy act of 1954, as amended (42 U.S.C. sec. 2021).

(E) Nothing in this compact confers any new authority on the states or commission to do any of the following:

(1) Regulate the packaging or transportation of low-level radioactive waste in a manner inconsistent with the regulations of the nuclear regulatory commission or the United States department of transportation.

(2) Regulate health, safety, or environmental hazards from source, by-product, or special nuclear material.

(3) Inspect the activities of licensees of the agreement states or of the nuclear regulatory commission.

DEPARTMENT OF HEALTH SERVICES

Title 12, Chapter 1, Article 3, Radioactive Material Licensing

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - FIVE-YEAR REVIEW REPORT

MEETING DATE: July 10, 2018

AGENDA ITEM: F-1

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE : June 19, 2018

SUBJECT: DEPARTMENT OF HEALTH SERVICES (F-18-0601)
Title 12, Chapter 1, Article 3, Radioactive Material Licensing

COMMENTS ON THE FIVE-YEAR-REVIEW REPORT

Purpose of the Agency and Number of Rules in the Report

The purpose of the Arizona Department of Health Services (Department) is to "protect the health of the people of the state." A.R.S. § 36-132(A)(1).

This five-year-review report covers 23 rules and five exhibits in A.A.C. Title 12, Chapter 1, Article 3, for Radioactive Material Licensing. Please note that after submission of this report, the Department renumbered the rules to A.A.C. Title 9, Chapter 7. R12-1-301, R12-1-302, and R12-1-303 describe requirements and exemptions related to ownership of described radioactive material. R12-1-304, R12-1-305, R12-1-306, R12-1-308, R12-1-309, R12-1-310, R12-1-311, R12-1-312, R12-1-313, R12-1-314, R12-1-315, R12-1-316, R12-1-317, R12-1-318, R12-1-319, R12-1-320, and R12-1-322 describe various licensing of radioactive materials. R12-1-323, R12-1-324, and R12-1-325 discuss decommissioning of radioactive materials. Exhibits A, B, and C discuss exemptions and limits for radioactive material licensing. Exhibit D describes radioactive materials requiring emergency plans. Exhibit E lists information needed on an application for a radioactive material license.

The rules were last amended at various times between 1999 and 2016. In the 2013 five-year-review report, the Department planned to amend the following rules: R12-1-301, R12-1-306, R12-1-308, R12-1-309, R12-1-310. The Department completed all of the proposed amendments prior to this five-year review report.

Proposed Action

The Department seeks to amend R12-1-302, R12-1-303, R12-1-304, R12-1-305, R12-1-306, R12-1-311, R12-1-313, and R12-1-323. They have submitted an Expedited Rulemaking to make these amendments.

1. Has the agency analyzed whether the rules are authorized by statute?

Yes. The Department cites A.R.S. § 30-654 for general authority. Under A.R.S. § 30-654, the Department shall “adopt rules deemed necessary to administer this chapter.” Further, the Department may “[d]o all things necessary... to carry out the powers and duties of the department.” The Department further cites A.R.S. §§ 30-651, 30-654, 30-657, 30-671, 30-672, 30-673, 30-681, 30-687, 30-688, 30-689, 32-516, and 32-3233 for specific authority.

2. Summary of the agency’s economic impact comparison and identification of stakeholders:

The Department estimates that the economic impact of the rules is minimal. Without state rules maintaining Arizona’s status as an agreement state, regulation would be enforced by the United States Nuclear Regulatory Commission (NRC), which would impose greater financial cost to stakeholders.

The stakeholders include the Department, NRC, 475 regulated licensees, and the general public.

3. Has the agency analyzed costs and benefits of the rule making and determined that the rules impose the least burden and costs to those who are regulated?

Yes. The Department determines that without state regulation, the program would be administered by the NRC, with increased fees to businesses and Arizonans. Therefore, the Department concludes that the rules impose the least burden and costs to those regulated while still protecting public health and safety.

4. Has the agency received any written criticisms of the rules over the last five years?

No. The Department states that it has not received any written criticisms of the rules in the past five years.

5. Has the agency analyzed the rules’ clarity, conciseness, and understandability, consistency with other rules and statutes, and effectiveness?

Yes. The Department indicates that all rules except R12-1-302, R12-1-303, R-12-1-305, R12-1-306, R12-1-311, R12-1-313, and R12-1-323 are clear, concise, and understandable, as well as effective, and consistent with other rules and statutes.

- R12-1-302(C)(2)(a) and (b) are inconsistent with federal statute 10 CFR 70 because they fail to provide a cutoff in manufacturing date or a “percent by weight” cutoff. The rule would be more effective if this was rectified.

- R12-1-303(B)(2), (3), and (4) are not consistent with 10 CFR 30.19, 30.20, 30.22, and 40.14 because they do not cite to requirements in the federal regulations. The rule also would be more clear, concise, and understandable if it used standard nomenclature for citing to the Arizona Administrative Code (“A.A.C.”) subsections, rather than the “paragraph nomenclature.” The rule would be more effective if these issues were rectified.
- R12-1-304 could be more clear, concise, and understandable by clarifying the language in subsection (A).
- R12-1-305 is inconsistent because the cross-reference in (C)(2) is incorrect. It should refer to R12-1-311(J) rather than R12-1-311(M). The rule would be more effective if this was rectified.
- R12-1-306 could be more clear, concise, and understandable by using the standard nomenclature for citing to A.A.C. subsections, rather than using the “paragraph” nomenclature. The rule would be more effective if this was rectified.
- R12-1-311 could be more clear, concise, and understandable by clarifying in subsections (A)(4)(b)(ii) and (iii) that the reports mentioned in the subsections refer to those reports discussed in subsection (A)(4)(b)(i). It could further be improved by correctly referencing A.R.S. § 30-657 in subsection (A)(5)(a). The rule would be more effective if this was rectified.
- R12-1-313 is inconsistent with 10 CFR 40.46 because it does not address the non-transferability of licenses without the Department’s approval. The rule would be more effective if this was rectified.
- R12-1-323 is not consistent with 10 CFR 30.35(e) and 10 CFR 40.36(d) because it fails to sufficiently address the “adequate contingency factor.” The rule could be more clear, concise, and understandable by using the standard nomenclature for citing to A.A.C. subsections, rather than using the “paragraph” nomenclature. The rule would be more effective if this was rectified.

6. Has the agency analyzed the current enforcement status of the rules?

Yes. The Department indicates that the rules are enforced as written.

7. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

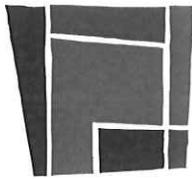
No. The Department indicates that the rules are not more stringent than corresponding federal law.

8. For rules adopted after July 29, 2010, do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

The Department indicates that it is exempt from A.R.S. § 41-1037 due to paragraph (A)(3), because the issuance of a general permit would not meet the statutory requirement of A.R.S. § 30-656, which allows Arizona to be an Agreement State, and compatibility of licensing is one of the requirements of the agreement.

9. Conclusion

The Department plans to amend the above discussed rules and has submitted a proposed rulemaking for such a purpose. The report meets the requirements of A.R.S. § 41-1056 and R1-6-301. Council staff recommends approval of this report.



ARIZONA DEPARTMENT OF HEALTH SERVICES

POLICY & INTERGOVERNMENTAL AFFAIRS

March 21, 2018

Nicole O. Colyer, Esq., Chair
Governor's Regulatory Review Council
Arizona Department of Administration
100 N. 15th Avenue, Suite 305
Phoenix, AZ 85007

RE: Report for A.A.C. Title 12, Chapter 1, Article 3 Radiation Regulatory Agency - Radioactive
Material Licensing

Dear Ms. Colyer:

According to the five-year-review report schedule of the Governor's Regulatory Review Council (Council), a report for A.A.C. Title 12, Chapter 1, Article 3 is due to the Council no later than April 30, 2018. The Arizona Department of Health Services (Department) has reviewed 12 A.A.C. 1, Article 3 and is enclosing a report to the Council for these rules.

The Department believes that this report complies with the requirements of A.R.S. § 41-1056. A five-year-review summary, information that is identical for all the rules, information for individual rules, the rules reviewed, and the general and specific authority for the rules are included in the package. As described in the report, the Department plans to amend the rules by expedited rulemaking by December 2018.

The Department certifies that it is in compliance with A.R.S. § 41-1091.

If you need any further information, please contact me at (602) 542-1020.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robert Lane', written over a white background.

Robert Lane
Director's Designee

RL:rms
Enclosures

Douglas A. Ducey | Governor Cara M. Christ, MD, MS | Director



ARIZONA DEPARTMENT OF HEALTH SERVICES

FIVE YEAR REVIEW REPORT
TITLE 12. NATURAL RESOURCES
CHAPTER 1. RADIATION REGULATORY AGENCY
ARTICLE 3: RADIOACTIVE MATERIAL LICENSING

MARCH 2018

FIVE YEAR REVIEW REPORT
TITLE 12. NATURAL RESOURCES
CHAPTER 1. RADIATION REGULATORY AGENCY
ARTICLE 3. RADIOACTIVE MATERIAL LICENSING

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5.	GENERAL AND SPECIFIC AUTHORITY	Attachment B

FIVE-YEAR REVIEW SUMMARY

Arizona Revised Statutes (A.R.S.) § 30-654(B)(5), as revised by Laws 2017 Ch. 313, § 6, requires the Arizona Department of Health Services (Department) to make rules “deemed necessary to administer this chapter in accordance with title 41, chapter 6.” The Department has adopted rules to implement this statute in Arizona Administrative Code (A.A.C.) Title 12, Chapter 1. In 12 A.A.C. 1, Article 3, the Department has adopted rules covering the licensing of radioactive materials. These include ownership of source material, radioactive material other than source material, licensing, special requirements for specific and broad scope licenses, reciprocity, specific terms and conditions, emergency planning, financial assurance and recordkeeping, decommissioning of facilities in a timely manner, limits, and exemptions.

Because of the change in the agency responsible for these rules, as revised by Laws 2017 Ch. 313, the Department plans to recodify the rules in 12 A.A.C. 1 into 9 A.A.C. 7 and change references to the agency responsible for the rules. However, this five-year-review report uses the current citations to the rules. After an analysis of the rules in 12 A.A.C. 1, Article 3, the Department has determined that all but four of the rules are clear, concise, and understandable; all are effective or mostly effective; and, except for R12-1-302, R12-1-303, R12-1-305, R12-1-313, and R12-1-323, all are consistent with state and federal statutes and rules, except for references to the responsible agency. The rules in 12 A.A.C. 1, Article 3 are enforced as written. The Department has received no written criticisms of the rules. However, the Department plans to amend the reviewed rules in 12 A.A.C. 1, Article 3 to remain compliant with federal requirements and the Agreement State Program through the U.S. Nuclear Regulatory Commission, as well as to address other issues identified in this five-year-review report. The Department plans to submit a Notice of Final Expedited Rulemaking to the Governor’s Regulatory Review Council (Council) by December 2018.

INFORMATION THAT IS IDENTICAL FOR ALL THE RULES

1. Authorization of the rule by existing statute

The general statutory authority for the rules in 12 A.A.C. 1, Article 3 is A.R.S. § 30-654.

The specific statutory authority for the rules in 12 A.A.C. 1, Article 3 are A.R.S. §§ 30-651, 30-654, 30-657, 30-671, 30-672, 30-673, 30-681, 30-687, 30-688, 30-689, 32-516, and 32-3233.

2. The purpose of the rule

The purpose of the rules contained in Article 3 is to provide the requirements covering the licensing of radioactive materials. Since Arizona is an Agreement State, according to the Document negotiated between the United States Atomic Energy Commission (now United States Nuclear Regulatory Commission) and the Governor of Arizona in March of 1967, Arizona must adopt regulations related to the control of radioactive material in a manner that is consistent with federal regulations.

3. Analysis of effectiveness in achieving the objective

Except as described for R12-1-302, R12-1-303, R12-1-305, R12-1-311, R12-1-313, and R12-1-323, the rules in 12 A.A.C. 1, Article 3 are effective in achieving their respective objectives.

4. Analysis of consistency with state and federal statutes and rules

Except as described for R12-1-302, R12-1-303, R12-1-305, R12-1-313, and R12-1-323 and except for references to the agency responsible for the rules, the rules in 12 A.A.C. 1, Article 3 are consistent with applicable statutes and rules.

5. Status of enforcement of the rules

The rules in 12 A.A.C. 1, Article 3 are enforced as written by the Department.

6. Analysis of clarity, conciseness, and understandability

Except as described for R12-1-303, R12-1-306, R12-1-311, and R12-1-323, the rules in 12 A.A.C. 1, Article 3 are clear, concise, and understandable.

7. Summary of written criticisms of the rules received within the last five years

The Department did not receive any written criticisms of the rules in the past five years.

8. Economic, small business, and consumer impact comparison

Currently there are approximately 475 licensees in the State of Arizona that use the rules and incorporated material in 12 A.A.C. 1 Article 3. These rules are required by the U.S. Nuclear Regulatory Agency's Agreement State Program. The Department estimates that the economic effects of these rules to be negligible.

Department assessment of the rules contained in Article 3 has determined that the rules are necessary and required by the Agreement State document signed between the Governor and the United States Atomic Energy Commission (now NRC) in 1967. The Department believes that the rules contained in Article 3, after amendments consistent with this report, will impose the least burden and costs to the regulated community but will protect the public health and safety from unsafe use of radiation sources. The alternative is to release control of the regulatory program back to the Federal government and increase the fees charged to the businesses and citizens of Arizona to the federal fee table.

9. Summary of business competitiveness analyses of the rules

The Department did not receive a business competitiveness analysis of the rules in the last five years.

10. Status of the completion of action indicated in the agency's previous five-year-review report

The Department completed all actions for Article 3 from the last five-year-review report.

11. A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective

Despite the issues identified in the report, the Department believes that the probable benefits of the rules outweigh within this state the probable costs of the rules, and the rules impose the least burden and costs to regulated persons by the rule.

12. Analysis of stringency compared to federal laws

The rules are not more stringent than federal law.

13. For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules comply with section 41-1037

The Department believes that it is exempt from A.R.S. § 41-1037 due to paragraph (A)(3), because the issuance of a general permit would not meet the statutory requirement of A.R.S. § 30-656, which allows Arizona to be an Agreement State, and compatibility of licensing is one of the requirements of the agreement.

14. Proposed course of action

The Department plans to amend the rules in 12 A.A.C. 1, Article 3, with a Notice of Final Expedited Rulemaking submitted to the Council by December 2018, to bring the Department into compliance with the Agreement State Program and make other changes to address issues described in this five-year-review report.

INFORMATION FOR INDIVIDUAL RULES

R12-1-301. Ownership, Control, or Transfer of Radioactive Material

2. Objective

The objective of the rule is to describe the requirements related to ownership of radioactive material.

R12-1-302. Source Material; Exemptions

2. Objective

The objective of the rule is to describe the conditions under which a person in possession of source material is exempt from the Article.

3. Analysis of effectiveness in achieving the objective

The rule is mostly effective, but the effectiveness could be improved if the issue described in paragraph 4 were addressed.

4. Analysis of consistency with state and federal statutes and rules

Subsections (C)(2)(a) and (b) are inconsistent with 10 CFR 70 in that they do not provide a cutoff in manufacturing date in subsection (C)(2)(a) or a “percent by weight” cutoff in subsection (C)(2)(b). Otherwise, the rule is consistent with state and federal regulations.

R12-1-303. Radioactive Material Other Than Source Material; Exemptions

2. Objective

The objective of the rule is to describe the conditions under which a person in possession of radioactive material other than source material is exempt from the Article.

3. Analysis of effectiveness in achieving the objective

The rule is mostly effective, but the effectiveness could be improved is the issues described in paragraphs 4 and 6 were addressed.

4. Analysis of consistency with state and federal statutes and rules

Subsections (B)(2), (B)(3), and (B)(4) are not consistent with 10 CFR 30.19, 30.20, 30.22, and 40.14 in that they do not cite to requirements in the federal regulations. Otherwise, the rule is consistent with state and federal regulations.

6. Analysis of clarity, conciseness, and understandability

The rule is mostly clear, concise, and understandable, but the rule could be improved by using the standard nomenclature for citing to subsections in the Arizona Administrative Code, rather than using the “paragraph” nomenclature used in federal regulations.

R12-1-304. License Types

2. Objective

The objective of the rule is to describe the two types of radioactive material licenses.

6. Analysis of clarity, conciseness, and understandability

The rule is mostly clear, concise, and understandable, but the rule could be improved by making the wording in subsection (A) clearer.

R12-1-305. General Licenses – Source Material

2. Objective

The objective of the rule is to describe:

- a. The general license for source material (uranium and/or thorium) and list the amounts that an entity may possess under the license, and
- b. Restrictions that set the boundaries of the general license by amount and use.

3. Analysis of effectiveness in achieving the objective

The rule is mostly effective, but the effectiveness could be improved if the issue described in paragraph 4 were addressed.

4. Analysis of consistency with state and federal statutes and rules

The cross-reference in subsection (C)(2) is incorrect and should refer to R12-1-311(J) rather than to R12-1-311(M). Otherwise, the rule is consistent with state and federal regulations.

R12-1-306. General License – Radioactive Material Other Than Source Material

2. Objective

The objective of the rule is to describe general license restrictions for materials that are not source material, setting the boundaries of the general material license by type and use of the non-source material.

6. Analysis of clarity, conciseness, and understandability

The rule is mostly clear, concise, and understandable, but subsection (G) could be improved by using the standard nomenclature for citing to subsections in the Arizona Administrative Code, rather than using the “paragraph” nomenclature used in federal regulations.

R12-1-308. Filing Application for Specific Licenses

2. Objective

The objective of the rule is to describe the method of applying for a specific license to use or possess radioactive material for a specific purpose.

R12-1-309. General Requirements for Issuance of Specific Licenses

2. Objective

The objective of the rule is to list the general requirements that must be met by an applicant of a specific license before being issued a license by the Department.

R12-1-310. Special Requirements for Issuance of Specific Broad Scope Licenses

2. Objective

The objective of the rule is to list the three classes of a specific broad scope license (Class A, Class B, and Class C) and describe the specific requirements of each broad scope license class.

R12-1-311. Special Requirements for a Specific License to Manufacture, Assemble, Repair, or Distribute Commodities, Products, or Devices that Contain Radioactive Material

2. Objective

The objective of the rule is to lists the license requirements for a specific license to create, form, or manufacture a product or device that contains radioactive material.

3. Analysis of effectiveness in achieving the objective

The rule is mostly effective, but the effectiveness could be improved is the issues described in paragraph 6 were addressed.

6. Analysis of clarity, conciseness, and understandability

The rule is mostly clear, concise, and understandable, but the rule could be improved by clarifying in subsections (A)(4)(b)(ii) and (iii) that the reports mentioned in the subsections refer to those in subsection (A)(4)(b)(i). The rule could also be improved by correctly referencing A.R.S. § 30-657 in subsection (A)(5)(a).

R12-1-312. Issuance of Specific Licenses

2. Objective

The objectives of the rule are to:

- a. Describe the situations where additional requirements or conditions may be added to a specific license, and
- b. List the requirement to allow Department inspections to any locations that the radioactive material may be stored or that it passed through.

R12-1-313. Specific Terms and Conditions

2. Objective

The objectives of the rule are to:

- a. Restrict the transfer of assignment of a license, and
- b. Specify that legal reorganizations by bankruptcy require written notice.

3. Analysis of effectiveness in achieving the objective

The rule is mostly effective, but the effectiveness could be improved if the issue described in paragraph 4 were addressed.

4. Analysis of consistency with state and federal statutes and rules

Subsection (F) is inconsistent with 10 CFR 40.46 in that it does not address the non-transferability of licenses without the Department's approval. Otherwise, the rule is consistent with state and federal regulations.

R12-1-314. Expiration of License

2. Objective

The objective of the rule is to describe the conditions of expiration of a license.

R12-1-315. Renewal of License

2. Objective

The objective of the rule is to describe the conditions for renewing a license.

R12-1-316. Amendment of Licenses at Request of Licensee

2. Objective

The objective of the rule is to list the requirement to amend a license when information changes.

R12-1-317. ARRA Action on Applications to Renew or Amend

2. Objective

The objective of the rule is to set the criteria for amending or renewing a license.

R12-1-318. Transfer of Radioactive Material

2. Objective

The objectives of the rule are to:

- a. Set the conditions for the transfer of radioactive material,
- b. List specific verification steps that must be taken to ensure that radioactive material is only transferred to authorized licensees, and
- c. Stipulates the requirement of proper packaging of radioactive material for transport.

R12-1-319. Modification, Revocation, or Termination of a License

2. Objective

The objective of the rule is to set forth the:

- a. Conditions where a radioactive material license may be modified, revoked, or terminated; and
- b. Minimum requirements for clean-up to ensure public health and safety.

R12-1-320. Reciprocal Recognition of Licenses

2. Objective

The objectives of the rule are to:

- a. Allow the Department to recognize licenses issued by other Agreement States or the NRC,
- b. Allow the temporary use of radioactive material in Arizona based upon the qualifications, intended use, and license of an entity that remains in Arizona 180 days or less, and
- c. Stipulate under what conditions a federal entity may use radioactive material in Arizona under a NRC license.

R12-1-322. The Need for an Emergency Plan for Response to a Release of Radioactive Material

2. Objective

The objectives of the rule are to:

- a. Set forth the requirement for an emergency plan related to the use of radioactive material, including factors that may be used for evaluation of the plan, and requirements for responding to accidental releases, and
- b. Require a timeframe for responders to make comments to an emergency plan that is submitted in support of a license application.

R12-1-323. Financial Assurance and Recordkeeping for Decommissioning

2. Objective

The objectives of the rule are to describe the:

- a. Requirements and conditions for financial assurance as a guarantee for clean up or decontamination after use or accidental release of radioactive material, and
- b. Describes the decommissioning procedures to be used upon termination or vacation of a site or facility that used or possessed radioactive material.

3. Analysis of effectiveness in achieving the objective

The rule is mostly effective, but the effectiveness could be improved if the issues described in paragraphs 4 and 6 were addressed.

4. Analysis of consistency with state and federal statutes and rules

Subsection (C)(1)(d) is not consistent with 10 CFR 30.35(e) and 10 CFR 40.36(d) because it does not sufficiently address the “adequate contingency factor.” Otherwise, the rule is consistent with state and federal regulations.

6. Analysis of clarity, conciseness, and understandability

The rule is mostly clear, concise, and understandable, but the rule could be improved by using the standard nomenclature for citing to subsections in the Arizona Administrative Code, rather than using the “paragraph” nomenclature used in federal regulations. In addition, the rule could be improved by clarifying the basis for developing the cost estimates required in subsection (C)(1).

R12-1-324. Public Notification and Public Participation

2. Objective

The objectives of the rule are to:

- a. Describe when the Department will notify members of the public about the termination or decommissioning of an area that housed or stored radioactive material, and
- b. Lists entities that may be contacted for comments.

R12-1-325. Timeliness in Decommissioning Facilities

2. Objective

The objective of the rule is to set the expected time limits for decommissioning a site contaminated by radioactive material.

Exhibit A. Exempt Concentrations

2. Objective

The objectives of the exhibit are to:

- a. List exempt concentrations of nuclides by elemental state of gas or solid, and
- b. Describes the unity rule.

Exhibit B. Exempt Quantities

2. Objective

The objective of the exhibit is to list the nuclides in microrcurie amounts of activity that are exempt.

Exhibit C. Limits for Class B and C Broad Scope Licenses (R12-1-310)

2. Objective

The objective of the exhibit is to list the limits for Class B and C, broad scope licenses, in microrcuries of activity.

Exhibit D. Radioactive Material Quantities Requiring Consideration for an Emergency Plan (R12-1-322)

2. Objective

The objective of the exhibit is to list the amount by activity of a nuclide that requires an emergency plan.

Exhibit E. Application Information

2. Objective

The objective of the exhibit is to list the minimum amount of information needed on an application for a license to possess or use radioactive material.



Replacement Check List

For rules filed within the
1st Quarter
January 1 - March 31, 2016

THE ARIZONA ADMINISTRATIVE CODE

Within the stated calendar quarter, this Chapter contains all rules made, amended, repealed, renumbered, and recodified; or rules that have expired or were terminated due to an agency being eliminated under sunset law. These rules were either certified by the Governor's Regulatory Review Council or the Attorney General's Office; or exempt from the rulemaking process, and filed with the Office of the Secretary of State. Refer to the historical notes for more information. Please note that some rules you are about to remove may still be in effect after the publication date of this Supplement. Therefore, all superseded material should be retained in a separate binder and archived for future reference.

Title 12. Natural Resources

Chapter 1. Radiation Regulatory Agency

Supplement Release Quarter: 16-1

Sections, Parts, Exhibits, Tables or Appendices modified

R12-1-102, R12-1-303, R12-1-306, R12-1-308, R12-1-311, R12-1-313, R12-1-320, R12-1-323, R12-1-418, R12-1-452, R12-1-503, R12-1-703, R12-1-1302, R12-1-1512, R12-1-1901 through R12-1-1999, R12-1-19100 through R12-1-19109, Appendix A, Table 1

REMOVE Supp. 15-1
Pages: 1 - 254

REPLACE with Supp. 16-1
Pages: 1 - 275

The agency's contact person who can answer questions about rules in Supp. 16-1:

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Disclaimer: Please be advised the person listed is the contact of record as submitted in the rulemaking package for this supplement. The contact and other information may have changed and is provided as a public courtesy.

PUBLISHER
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Office of the Secretary of State, Public Services Division

PREFACE

Under Arizona law, the Department of State, Office of the Secretary of State (Office), accepts state agency rule filings and is the publisher of Arizona rules. The Office of the Secretary of State does not interpret or enforce rules in the Administrative Code. Questions about rules should be directed to the state agency responsible for the promulgation of the rule.

Scott Cancelosi, Director
PUBLIC SERVICES DIVISION
March 31, 2016

RULES

A.R.S. § 41-1001(17) states: “‘Rule’ means an agency statement of general applicability that implements, interprets, or prescribes law or policy, or describes the procedures or practice requirements of an agency.”

THE ADMINISTRATIVE CODE

The Arizona Administrative Code is where the official rules of the state of Arizona are published. The Code is the official codification of rules that govern state agencies, boards, and commissions. Virtually everything in your life is affected in some way by rules published in the Arizona Administrative Code, from the quality of air you breathe to the licensing of your dentist. This chapter is one of more than 230 in the Code compiled in 21 Titles.

ADMINISTRATIVE CODE SUPPLEMENTS

Rules filed by an agency to be published in the Administrative Code are updated quarterly. Supplement release dates are printed on the footers of each chapter:

First Quarter: January 1 - March 31
Second Quarter: April 1 - June 30
Third Quarter: July 1 - September 30
Fourth Quarter: October 1 - December 31

For example, the first supplement for the first quarter of 2016 is cited as Supp. 16-1.

HOW TO USE THE CODE

Rules may be in effect before a supplement is released by the Office. Therefore, the user should refer to issues of the Arizona Administrative Register for recent updates to rule Sections.

ARTICLES AND SECTIONS

Rules in chapters are divided into Articles, then Sections. The “R” stands for “rule” with a sequential numbering and lettering system separated into subsections.

HISTORICAL NOTES AND EFFECTIVE DATES

Historical notes inform the user when the last time a Section was updated in the Administrative Code. Be aware, since the Office publishes each quarter by entire chapters, not all Sections are updated by an agency in a supplement release. Many times just one Section or a few Sections may be updated in the entire chapter.

ARIZONA REVISED STATUTE REFERENCES

The Arizona Revised Statutes (A.R.S.) are available online at the Legislature’s website, www.azleg.gov. An agency’s authority note to make rules are often included at the beginning of a chapter. Other Arizona statutes may be referenced in rule under the A.R.S. acronym.

SESSION LAW REFERENCES

Arizona Session Law references in the introduction of a chapter can be found at the Secretary of State’s website, www.azsos.gov/services/legislative-filings.

EXEMPTIONS FROM THE APA

It is not uncommon for an agency to be exempt to the steps outlined in the rulemaking process as specified in the Arizona Administrative Procedures Act, also known as the APA (Arizona Revised Statutes, Title 41, chapter 6, Articles 1 through 10). Other agencies may be given an exemption to certain provisions of the Act.

An agency’s exemption is written in law from the Arizona State Legislature or under a referendum or initiative passed into law by Arizona voters.

When an agency files an exempt rulemaking package with our Office it specifies the law exemption in what is called the preamble of rulemaking. The preamble is published in the Arizona Administrative Register online at www.azsos.gov/rules, click on the Administrative Register link.

In the Administrative Code the Office includes editor’s notes at the beginning of a chapter indicating that certain rulemaking Sections were made by exempt rulemaking. Exempt rulemaking notes are also included in the historical note at the end of a rulemaking Section.

The Office makes a distinction to certain exemptions because some rules are made without receiving input from stakeholders or the public. Other exemptions may require an agency to propose exempt rules at a public hearing.

EXEMPTIONS AND PAPER COLOR

If you are researching rules and come across rescinded chapters on a different paper color, it is because the agency filed a Notice of Exempt Rulemaking. At one time the office published exempt rules on either blue or green paper. Blue meant the authority of the exemption was given by the Legislature; green meant the authority was determined by a court order. In 2001 the Office discontinued publishing rules using these paper colors.

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Public Services managing rules editor, Rhonda Paschal, assisted with the editing of this chapter.

TITLE 12. NATURAL RESOURCES

CHAPTER 1. RADIATION REGULATORY AGENCY

Authority: A.R.S. § 30-651 et seq.

Editor’s Note: This Chapter has rules in Supp. 16-1 that were filed in the Office on February 3, 2016, with an immediate effective date of February 2, 2016, the date approved by the Governor’s Regulatory Review Council, in order to remain in federal compliance with Agreement State status as stipulated in A.R.S. § 41-1032(A)(2).

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ARTICLE 1. GENERAL PROVISIONS**R12-1-101. Scope and Incorporated Materials**

- A.** Except as otherwise specifically provided, this Chapter applies to all persons who receive, possess, use, transfer, own, or acquire any source of radiation.
- B.** This Chapter does not apply to any person that is subject to regulation by the Nuclear Regulatory Commission.
- C.** State control of source material, byproduct material, and special nuclear material in quantities not sufficient to form a critical mass is subject to the provisions of the agreement between the state and the U.S. Nuclear Regulatory Commission, signed March 30, 1967 and incorporated by reference. This incorporated material contains no later editions or amendments, and together with all other incorporated materials in this Chapter, is available for inspection or copying at the Arizona Radiation Regulatory Agency, 4814 S. 40th St., Phoenix, AZ 85040.
- D.** Federal regulations incorporated by reference in this Chapter are available from the U.S. Government Printing Office, P.O. Box 979050, St. Louis, MO 63197-9000 and <http://www.gpo-access.gov/cfr/>.

Historical Note

Former Rule Section A.1; Former Section R12-1-101 repealed, new Section R12-1-101 adopted effective June 30, 1977 (Supp. 77-3). Amended effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-102. Definitions

Terms defined in A.R.S. § 30-651 have the same meanings when used in this Chapter, unless the context otherwise requires. Additional subject-specific definitions are used in other Articles.

“A1” means the maximum activity of special form radioactive material permitted in a type A package. These values are either listed in 10 CFR 71, Appendix A, Table A-1, or may be derived in accordance with the procedures prescribed in 10 CFR 71, Appendix A, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“A2” means the maximum activity of radioactive material, other than special form radioactive material, low specific activity (LSA) material, and surface contaminated object (SCO) material, permitted in a Type A package. These values are either listed in 10 CFR 71, Appendix A, Table A-1, or may be derived in accordance with the procedure prescribed in 10 CFR 71, Appendix A, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Absorbed dose” means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the gray (Gy) and the rad.

“Accelerator” means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV. For purposes of this definition, “particle accelerator” is an equivalent term.

“Accelerator produced material” means any material made radioactive by irradiating it in a particle accelerator.

“Act” means A.R.S. Title 30, Chapter 4.

“Activity” means the rate of disintegration, transformation, or decay of radioactive material. The units of activity are the becquerel (Bq) and the curie (Ci).

“Adult” means an individual 18 or more years of age.

“Agency,” or “ARRA” means the Arizona Radiation Regulatory Agency.

“Agreement State” means any state with which the United States Nuclear Regulatory Commission has entered into an effective agreement under Section 274(b) of the Atomic Energy Act of 1954, as amended (73 Stat. 689). “Nonagreement State” means any other state.

“Airborne radioactive material” means any radioactive material dispersed in the air in the form of aerosols, dusts, fumes, mists, vapors, or gases.

“Airborne radioactivity area” means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed radioactive material, exist in concentrations:

In excess of the derived air concentrations (DACs) specified in Appendix B, Table I of Article 4 of these rules; or

That an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.

“ALARA” means as low as is reasonably achievable, making every reasonable effort to maintain exposures to radiation as far below the dose limits in these rules as is practical, consistent with the purpose for which the licensed or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed or registered sources of radiation in the public interest.

“Analytical x-ray equipment” means equipment used for x-ray diffraction or x-ray-induced fluorescence analysis.

“Analytical x-ray system” means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials.

“Annual” means done or performed yearly. For purposes of Chapter 1 any required activity done or performed within plus or minus two weeks of the annual due date is considered done or performed in a timely manner.

“Authorized medical physicist” means an individual who meets the requirements in R12-1-711; or is identified as an authorized medical physicist or teletherapy physicist on:

A specific medical use license issued by the Agency, NRC, or another Agreement State;

A medical use permit issued by a NRC master material licensee;

A permit issued by an Agency, NRC, or another Agreement State broad scope medical use licensee; or

A permit issued by a NRC master material license broad scope medical use permittee.

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“Authorized nuclear pharmacist” means a pharmacist who meets the requirements in R12-1-712; or is identified as an authorized nuclear pharmacist on:

A specific license issued by an Agency, NRC, or another Agreement State that authorizes medical use or the practice of nuclear pharmacy;

A permit issued by a NRC master material licensee that authorizes medical use or the practice of nuclear pharmacy;

A permit issued by an Agency, NRC, or another Agreement State broad scope medical use licensee that authorizes medical use or the practice of nuclear pharmacy; or

A permit issued by a NRC master material license broad scope medical use permittee that authorizes medical use or the practice of nuclear pharmacy; or

Is identified as an authorized nuclear pharmacist by a commercial nuclear pharmacy that has been authorized to identify authorized nuclear pharmacists; or

Is designated as an authorized nuclear pharmacist in accordance with R12-1-311(G).

“Authorized user” means a physician, dentist, or podiatrist who meets the requirements in R12-1-719, R12-1-723, R12-1-727, R12-1-728, or R12-1-744; or is identified as an authorized user on:

An Agency, NRC, or another Agreement State license that authorizes the medical use of radioactive material;

A permit issued by a NRC master material licensee that is authorized to permit the medical use of radioactive material;

A permit issued by an Agency, NRC, or another Agreement State specific licensee of broad scope that is authorized to permit the medical use of radioactive material; or A permit issued by a NRC master material license broad scope permittee that is authorized to permit the medical use of radioactive material.

“Background radiation” means radiation from cosmic sources; not technologically enhanced naturally occurring radioactive material, including radon (except as a decay product of source or special nuclear material); and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents, such as Chernobyl, that contribute to background radiation and are not under the control of a licensee. “Background radiation” does not include sources of radiation regulated by the Agency.

“Becquerel” (Bq) means the International System (SI) unit for activity and is equal to 1 disintegration per second (dps or tps).

“Bioassay” means the determination of kinds, quantities, or concentrations, and in some cases, the locations of radioactive material in the human body, whether by direct measurement, in vivo counting, or by analysis and evaluation of materials excreted or removed from the human body. For purposes of these rules, “radiobioassay” is an equivalent term.

“Brachytherapy” means a method of radiation therapy in which an encapsulated source or group of sources is utilized to deliver beta or gamma radiation at a distance of up to a few centimeters, by surface, intracavitary or interstitial application.

“Byproduct material” means:

Any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium or thorium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute “byproduct material” within this definition;

Any discrete source of radium-226 that is produced, extracted, or converted after extraction, for use for a commercial, medical, or research activity; or any material that, has been made radioactive by use of a particle accelerator; and is produced, extracted, or converted after extraction, for use for a commercial, medical, or research activity; and

Any discrete source of naturally occurring radioactive material, other than source material, that the NRC, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security and; before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

“Calendar quarter” means not less than 12 consecutive weeks nor more than 14 consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged such that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. A licensee or registrant shall not change the method of determining calendar quarters for purposes of this Chapter except at the beginning of a calendar year.

“Calibration” means the determination of:

The response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or

The strength of a source of radiation relative to a standard.

“Carrier” means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

“Certifiable cabinet x-ray system” means an existing uncertified x-ray system that meets or has been modified to meet the certification requirements specified in 21 CFR 1020.40, revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Certificate holder” means a person who has been issued a certificate of compliance or other package approval by the Agency or NRC.

“Certificate of Compliance” (CoC) means the certificate issued by the NRC under 10 CFR 71, Subpart D, (Revised Jan-

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uary 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), which authorizes the design of a package for the transportation of radioactive material.

“Certified cabinet x-ray system” means an x-ray system that has been certified in accordance with 21 CFR 1010.2, as being manufactured and assembled on or after April 10, 1975, in accordance with the provisions of 21 CFR 1020.40, both sections revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“CFR” means Code of Federal Regulations.

“Chelating agent” means amine polycarboxylic acids, hydroxycarboxylic acids, gluconic acid, and polycarboxylic acids.

“Civil penalty” means the monetary fine which may be imposed on licensees by the Agency, pursuant to A.R.S. § 30-687, for violations of the Act, this Chapter, or license conditions.

“Collective dose” means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

“Committed dose equivalent” (HT,50) means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

“Committed effective dose equivalent” (HE,50) is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($HE,50 = S wT,HT,50$).

“Consortium” means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution or a federal facility or a medical facility.

“Curie” means a unit of quantity of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of $3.7E + 10^{10}$ transformations per second (tps).

“Current license or registration” means a license or registration issued by the Agency and for which the licensee has paid the license or registration fee for the current year according to R12-1-1304.

“Deep-dose equivalent” (Hd), which applies to external whole body exposure, is the dose equivalent at a tissue depth of 1 centimeter (1000 mg/cm²).

“Depleted uranium” means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

“Discrete source” means a radionuclide that has been processed so that its concentration within a material has been pur-

posely increased for use for commercial, medical, or research activities.

“Dose” is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these rules, “radiation dose” is an equivalent term.

“Dose equivalent” (HT) means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the sievert (Sv) and rem.

“Dose limits” means the permissible upper bound of radiation doses established in accordance with these rules. For purposes of these rules, “limits” is an equivalent term.

“Dosimeter” (See “Individual monitoring device”)

“Effective dose equivalent” (HE) means the sum of the products of the dose equivalent to each organ or tissue (HT) and the weighting factor (wT) applicable to each of the body organs or tissues that are irradiated ($HE = S wTHT$).

“Effluent release” means any disposal or release of radioactive material into the ambient atmosphere, soil, or any surface or subsurface body of water.

“Embryo/fetus” means the developing human organism from conception until the time of birth.

“Enclosed beam x-ray system” means an analytical x-ray system constructed in such a way that access to the interior of the enclosure housing the x-ray source during operation is precluded except through bypassing of interlocks or other safety devices to perform maintenance or servicing.

“Enclosed radiography” means industrial radiography conducted by using cabinet radiography or shielded room radiography.

“Cabinet radiography” means industrial radiography conducted by using an x-ray machine in an enclosure not designed for human admittance and which is so shielded that every location on the exterior meets the conditions for an “unrestricted area.”

“Shielded room radiography” means industrial radiography conducted using an x-ray machine in an enclosure designed for human admittance and which is so shielded that every location of the exterior meets the conditions for an “unrestricted area.”

“Entrance or access point” means any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

“Exhibit” for purposes of these rules, is equivalent in meaning to the word “Schedule” as found in previously issued rules, current license conditions, and regulation guide.

“Explosive material” means any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

“Exposure” means:

Being subjected to ionizing radiation or radioactive materials.

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The quotient of dQ by dm where “dQ” is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass “dm” are completely stopped in air. The special unit of exposure is the roentgen (R).

“Exposure rate” means the exposure per unit of time.

“External dose” means that portion of the dose equivalent received from any source of radiation outside the body.

“Extremity” means the shoulder girdle to the phalanges and the lower two-thirds of the femur to the phalanges.

“Fail-safe characteristics” means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

“FDA” means the United States Food and Drug Administration.

“Field radiography” means industrial radiography, utilizing a portable or mobile x-ray system, which is not conducted in a shielded enclosure.

“Field station” means a facility where radioactive sources may be stored or used and from which equipment is dispatched to temporary job sites.

“Former U.S. Atomic Energy Commission (AEC) or U.S. Nuclear Regulatory Commission (NRC) licensed facilities” means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or critical mass experimental facilities where AEC or NRC licenses have been terminated.

“Generally applicable environmental radiation standards” means standards issued by the U.S. Environmental Protection Agency (EPA), 40 CFR 190 and 191, revised July 1, 2013, incorporated by reference, and available under R12-1-101, under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material. This incorporated material contains no future editions or amendments.

“Gray” (Gy) means the International System (SI) unit of absorbed dose and is equal to 1 joule per kilogram. One gray equals 100 rad.

“Hazardous waste” means those wastes designated as hazardous in A.R.S. § 49-921(5).

“Healing arts” means the practice of medicine, dentistry, osteopathy, podiatry, chiropractic, and veterinary medicine.

“Health care institution” means every place, institution, or building which provides facilities for medical services or other health-related services, not including private clinics or offices which do not provide overnight patient care.

“High radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 1 mSv (0.1 rem) in one hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

“Human use” means the internal or external administration of radiation or radioactive materials to human beings.

“Impound” means to abate a radiological hazard. Actions which may be taken by the Agency in impounding a source of radiation include seizing the source of radiation, controlling access to an area, and preventing a radiation machine from being utilized.

“Indian tribe” means an Indian or Alaska native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a.

“Individual” means any human being.

“Individual monitoring” means the assessment of:

Dose equivalent

By the use of individual monitoring devices, or
By the use of survey data, or

Committed effective dose equivalent

By bioassay; or

By determination of the time-weighted air concentrations to which an individual has been exposed, that is, DAC-hours. (See the definition of DAC-hours in Article 4).

“Individual monitoring device” means a device designed to be worn by a single individual for the assessment of dose equivalent. For purposes of this Chapter, “dosimeter” and “personnel dosimeter,” are equivalent terms. Examples of individual monitoring devices are film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, optical stimulation devices, and personal (“lapel”) air sampling devices.

“Individual monitoring equipment” means one or more individual monitoring devices. For purposes of this Chapter, “personnel monitoring equipment” is an equivalent term.

“Industrial radiography” means the examination of the macroscopic structure of materials by non-destructive methods utilizing sources of ionizing radiation.

“Injection tool” means a device used for controlled subsurface injection of radioactive tracer material.

“Inspection” means an examination or observation by a representative of the Agency, including but not limited to tests, surveys, and monitoring to determine compliance with rules, orders, requirements and conditions of the License or certificate of registration.

“Interlock” means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

“Internal dose” means that portion of the dose equivalent received from radioactive material taken into the body.

“Irradiate” means to expose to radiation.

“Laser” (light amplification by the stimulated emission of radiation) means any device which can produce or amplify electromagnetic radiation with wave lengths in the range of 180 nanometers to 1 millimeter primarily by the process of controlled stimulated emission.

“Lens dose equivalent” (LDE) means the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeters (300 mg/cm²).

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“License” means the grant of authority, issued pursuant to Articles 3 and 14 of this Chapter and A.R.S. §§ 30-671, 30-672, and 30-721 et seq., to acquire, possess, transfer, and use sources of radiation. The types of licenses issued by the Agency are described in R12-1-1302.

“Licensed material” means radioactive material received, possessed, used, transferred, or disposed of under a general or specific license issued by the Agency.

“Licensed practitioner” means a person licensed or otherwise authorized by law to practice medicine, dentistry, osteopathy, chiropractic, podiatry, or naturopathy in this state.

“Licensee” means any person who is licensed by the Agency under this Chapter to acquire, possess, transfer, or use sources of radiation.

“Licensing State” means any state having regulations equivalent to this Chapter relating to, and an effective program for the regulation of, naturally occurring and accelerator-produced radioactive material (NARM).

“Limits” (See “Dose limits”)

“Local components” means those parts of an analytical x-ray system that are struck by x-rays, including radiation source housings, port and shutter assemblies, collimator, sample holders, cameras, goniometer, detectors and shielding but not including power supplies, transformers, amplifiers, readout devices, and control panels.

“Logging supervisor” means the individual who provides personal supervision of the utilization of sources of radiation at the well site.

“Logging tool” means a device used subsurface to perform well logging.

“Lost or missing licensed or registered source of radiation” means licensed or registered source of radiation the location of which is unknown. Included are licensed radioactive material or a registered radiation source that has been shipped but has not reached its planned destination and whose location cannot be readily traced or ascertained in the transportation system.

“Low-level waste” means waste material which contains radioactive nuclides in concentrations or quantities which exceed applicable standards for unrestricted release but does not include:

High-level waste, such as irradiated reactor fuel, liquid waste from reprocessing irradiated reactor fuel, or solids into which any such liquid waste has been converted;

Waste material containing transuranic elements with contamination levels greater than 10 nanocuries per gram (370 kilobecquerels per kilogram) of waste material;

The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

“Major processor” means a user processing, handling, or manufacturing radioactive material exceeding Type A quantities as unsealed sources or material or exceeding four times Type B quantities as sealed sources but does not include nuclear medicine programs, universities, industrial radiographers, or small industrial programs. Type A and B quantities are defined in 10 CFR 71.4, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Medical dose” means a radiation dose intentionally delivered to an individual for medical examination, diagnosis, or treatment.

“Member of the public” means any individual except when that individual is receiving an occupational dose.

“MeV” means Mega Electron Volt which equals 1 million volts (10⁶ eV).

“Mineral logging” means any well logging performed in a borehole drilled for the purpose of exploration for minerals other than oil or gas.

“Minor” means an individual less than 18 years of age.

“Monitoring” means the measurement of radiation, radioactive material concentrations, surface area activities, or quantities of radioactive material, and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these rules, “radiation monitoring” and “radiation protection monitoring” are equivalent terms.

“Multiplier” means a letter representing a number. The use of a multiplier is based on the code given below:

<i>Prefix</i>	<i>Multiplier Symbol</i>	<i>Value</i>
eka	E	10 ¹⁸
peta	P	10 ¹⁵
tera	T	10 ¹²
giga	G	10 ⁹
mega	M	10 ⁶
kilo	k	10 ³
milli	m	10 ⁻³
micro	u	10 ⁻⁶
nano	n	10 ⁻⁹
pico	p	10 ⁻¹²
femto	f	10 ⁻¹⁵
atto	a	10 ⁻¹⁸

“NARM” means any naturally occurring or accelerator-produced radioactive material. It does not include byproduct, source, or special nuclear material. This term should not be confused with “NORM” which is defined as naturally occurring radioactive material.

“Normal operating procedures” means the entire set of instructions necessary to accomplish the intended use of the source of radiation. These procedures shall include, but are not limited to, sample insertion and manipulation, equipment alignment, routine maintenance by the licensee, and data recording procedures which are related to radiation safety.

“Natural radioactivity” means the radioactivity of naturally occurring radioactive substances.

“NRC” means Nuclear Regulatory Commission, the U.S. Nuclear Regulatory Commission, or its duly authorized representatives.

“Nuclear waste” means any highway route controlled quantity (defined in 49 CFR 173.403, revised October 1, 2012, incorporated by reference, and available under R12-1-101; this incorporated material contains no future editions or amendments) of source, byproduct, or special nuclear material required to be in NRC-approved packaging while transported to, through, or across state boundaries to a disposal site, or to a collection

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point for transport to a disposal site. Additional requirements associated with transportation of radioactive material can be found in Article 15.

“Occupational dose” means the dose received by an individual in the course of employment in which the individual’s assigned duties involve exposure to sources of radiation, whether in the possession of a licensee, registrant, or other person. Occupational dose does not include a dose received from background radiation, medical administration of radiation to the individual, exposure to an individual who has been administered radioactive material and released in accordance with R12-1-717, voluntary participation in a medical research program, or as a member of the public.

“Open beam system” means an analytical x-ray system in which an individual could place some body part in the primary beam path during normal operation.

“Package” means the packaging together with its radioactive contents as presented for transport.

“Particle accelerator” (See “Accelerator”)

“Permanent radiographic installation” means a fixed, shielded installation or structure designed or intended for industrial radiography and in which industrial radiography is regularly performed.

“Personnel dosimeter” (See “Individual monitoring device”)

“Personnel monitoring equipment” (See “Individual monitoring device”)

“Personal supervision” means supervision in which the supervising individual is physically present at the site where sources of radiation and associated equipment are being used, watching the performance of the supervised individual and in such proximity that immediate assistance can be given if required.

“PET” (See Positron Emission Tomography (PET))

“Pharmacist” means an individual licensed by this state to compound and dispense drugs, prescriptions, and poisons.

“Physician” means an individual licensed pursuant to A.R.S. Title 32, Chapters 13 or 17.

“Positron Emission Tomography (PET)” means an imaging technique using radionuclides to produce high resolution images of the body’s biological functions.

“Positron Emission Tomography radionuclide production facility” means a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.

“Preceptor” means an individual who provides, directs, or verifies training and experience required for an individual to become an authorized user, an authorized medical physicist, an authorized nuclear pharmacist, or a Radiation Safety Officer.

“Primary beam” means radiation which passes through an aperture of the source housing by a direct path from the x-ray tube or a radioactive source located in the radiation source housing.

“Public dose” means the dose received by a member of the public from radiation from radioactive material released by a licensee or registrant, or exposure to a source of radiation used in a licensed or registered operation. It does not include an occupational dose or a dose received from background radiation, medical administration of radiation to the individual, exposure to an individual who has been administered radioac-

tive material and released in accordance with R12-1-717, or voluntary participation in a medical research program.

“Pyrophoric liquid” means any liquid that ignites spontaneously in dry or moist air at or below 130× F (54.4× C).

“Pyrophoric solid” means any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and, when ignited, burns so vigorously and persistently that it creates a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

“Qualified expert” means an individual certified in the appropriate field by the American Board of Radiology or the American Board of Health Physics, or having equivalent qualifications that provide the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs; or an individual certified in Therapeutic Radiological Physics or X-ray and Radium Physics by the American Board of Radiology, or having equivalent qualifications that provide training and experience in the clinical applications of radiation physics to radiation therapy, to calibrate radiation therapy equipment. The detailed requirements for a particular qualified expert may be provided in the respective Articles of this Chapter. For clarification purposes, a qualified expert is not always an authorized medical physicist; however, an authorized medical physicist is included within the definition of “qualified expert.”

“Quality Factor” (Q) means the modifying factor, listed in Tables I and II of this Article, that is used to derive dose equivalent from absorbed dose.

“Quarter” (See “Calendar quarter”)

“Rad” means the special unit of absorbed dose. One rad equals 100 ergs per gram, or 0.01 gray.

“Radiation” means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of these rules, this term is synonymous with ionizing radiation. Equivalent terminology for non-ionizing radiation is defined in Article 14.

“Radiation area” means any area accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.05 mSv (0.005 rem) in one hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

“Radiation dose” (See “Dose”)

“Radiation machine” means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.

“Radiation Safety Officer” (RSO) means the individual and who for license conditions:

Meets the requirements in 10 CFR 35.50(a) or (c)(1) and 10 CFR 35.59, (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or is identified as a Radiation Safety Officer on a specific medical use license issued by the NRC or an Agreement State; or a medical use permit issued by a NRC master material licensee;

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Or, who, for registration conditions, is designated by the registrant as the individual who has the knowledge, authority, and responsibility to apply appropriate radiation protection principles to ensure radiation safety and compliance with the Act, this Chapter and any registration conditions.

“Radiation Safety Officer” (RSO) means the individual and who for license conditions:

Meets the requirements of R12-1-407, and for a medical license meets the training requirements of R12-1-710 or is identified as a Radiation Safety Officer on a specific medical use license issued by the Agency, NRC, or another Agreement State; or a medical use permit issued by a NRC master material licensee;

Or, who meets the requirements in R12-1-512 on a specific industrial license issued by the Agency, NRC, or another Agreement State; or an industrial use permit issued by a NRC master material licensee;

Or, who, for registration conditions, is designated by the registrant as the individual who has the knowledge, authority, and responsibility to apply appropriate radiation protection principles to ensure radiation safety and compliance with the Act, this Chapter and any registration conditions.

“Radioactive marker” means radioactive material placed subsurface or on a structure intended for subsurface use for the purpose of depth determination or direction orientation.

“Radioactive material” means any solid, liquid, or gas which emits radiation spontaneously.

“Radioactivity” means emission of electromagnetic energy or particles or both during the transformation of unstable atomic nuclei.

“Radiographer” means any individual who performs or personally supervises industrial radiographic operations and who is responsible to the licensee or registrant for assuring compliance with the requirements of this Chapter and all conditions of the license or certificate of registration.

“Radiographer’s assistant” means any individual who, under the personal supervision of a radiographer, uses sources of radiation, radiographic exposure devices, related handling tools, or survey instruments in industrial radiography.

“Registrant” means any person who is registered with the Agency and is legally obligated to register with the Agency pursuant to these rules and the Act.

“Registration” is the process by which a person becomes a registrant pursuant to Article 2 or 14 of this Chapter. With the exception of registration of persons who install or service radiation machines, the types of registrations issued by the Agency are described in R12-1-1302.

“Regulations of the U.S. Department of Transportation” means the federal regulations in 49 CFR 107, 171 through 180, revised October 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

“Rem” means the special unit of dose equivalent (see “Dose equivalent”). The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem = 0.01 sievert).

“Research and Development” means exploration, experimentation, or the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes. Research and Development does not include the internal or external administration of radiation or radioactive material to human beings.

“Restricted area” means any area where the licensee or registrant controls access for purposes of protecting individuals from exposure to radiation and radioactive material. A restricted area does not include any areas used for residential quarters, although a room or separate rooms in a residential building may be set apart as a restricted area.

“Roentgen” (R) means the special unit of exposure and is equal to the quantity of x or gamma radiation which causes ionization in air equal to 258 microcoulomb per kilogram (see “Exposure”).

“Safety system” means any device, program, or administrative control designed to ensure radiation safety.

“Sealed source” means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.

“Sealed Source and Device Registry” means the national registry that contains all the registration certificates, generated by both the NRC and the Agreement States, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for each source or device.

“Shallow dose equivalent” (HS), which applies to the external exposure of the skin of the whole body or the skin of an extremity, is taken as the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm²).

“Shielded position” means the location within a radiographic exposure device or storage container which, by manufacturer’s design, is the proper location for storage of the sealed source.

“Sievert” means the SI unit of dose equivalent (see “Dose equivalent”). The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor (1 Sv = 100 rem).

“Site boundary” means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee or registrant.

“Source changer” means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those also used for transporting and storage of sealed sources.

“Source holder” means a housing or assembly into which a radioactive source is placed for the purpose of facilitating the handling and use of the source in well-logging operations.

“Source material” means:

Uranium or thorium, or any combination of uranium or thorium, in any physical or chemical form; or

Ores that contain by weight 1/20 of 1 percent (0.05 percent) or more of uranium, thorium, or any combination of uranium and thorium.

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Source material does not include special nuclear material.

“Source material milling” means any activity that results in the production of byproduct material as defined by the second subsection under the definition of “Byproduct material.”

“Source of radiation” or “source” means any radioactive material or any device or equipment emitting, or capable of producing, radiation.

“Special form radioactive material” means radioactive material that satisfies all of the following conditions:

It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

The piece or capsule has at least one dimension not less than 5 millimeters (0.2 inch); and

It satisfies the test requirements specified in 10 CFR 71.75, revised January 1, 2013, incorporated by reference, available under R12-1-101. This incorporated material contains no future editions or amendments. A special form encapsulation designed in accordance with the U.S. Nuclear Regulatory Commission requirements in effect on June 30, 1983, and constructed prior to July 1, 1985, may continue to be used. A special form encapsulation constructed after June 30, 1985, shall meet requirements of this definition applicable at the time of its construction.

“Special nuclear material in quantities not sufficient to form a critical mass” means Uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; Uranium-233 in quantities not exceeding 200 grams; Plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: for each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed one. For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{XgmsU235}{350} + \frac{YgmsU233}{200} + \frac{ZgmsPu}{200} \leq 1$$

“Storage area” means any location, facility, or vehicle which is used to store, transport, or secure a radiographic exposure device, storage container, sealed source, or other source of radiation when it is not in use.

“Storage container” means a device in which sealed sources are transported or stored.

“Subsurface tracer study” means the release of a substance tagged with radioactive material for the purpose of tracing the movement or position of the tagged substance in the well-bore or adjacent formation.

“Survey” means an evaluation of the production, use, release, disposal, or presence of sources of radiation or any combination thereof under a specific set of conditions to determine actual or potential radiation hazards. Such evaluations include, but are not limited to, tests, physical examination and measurements of levels of radiation or concentration of radioactive material present.

“TEDE” (See “Total Effective Dose Equivalent”)

“Teletherapy” means therapeutic irradiation in which the source of radiation is at a distance from the body.

“Temporary job site” means any location where sources of radiation are used other than the specified locations listed on a license document. Storage of sources of radiation at a temporary jobsite shall not exceed six months unless the Agency has granted an amendment authorizing storage at that jobsite.

“Test” means the process of verifying compliance with an applicable rule, order, or license condition.

“These rules” means all Articles of 12 A.A.C. 1.

“Total Effective Dose Equivalent” (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

“Total Organ Dose Equivalent” (TODE) means the sum of the deep-dose equivalent and the committed dose equivalent to the organ receiving the highest dose. Determination of TODE is described in R12-1-411.

“Tribal official” means the highest ranking individual that represents Tribal leadership, such as the Chief, President, or Tribal Council leadership.

“Unrefined and unprocessed ore” means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining.

“Unrestricted area” means any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive material. Any area used for residential quarters is an unrestricted area.

“U.S. Department of Energy” means the Department of Energy established by P.L. 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the Department exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers, and components; and transferred to the U.S. Energy Research and Development Administration and to the administrator of that agency under sections 104(b), (c), and (d) of the Energy Reorganization Act of 1974 (P.L. 93-438, October 11, 1974, 88 Stat. 1233 at 1237, 42 U.S.C. 5814, effective January 19, 1975) and retransferred to the Secretary of Energy under Section 301(a) of the Department of Energy Organization Act (P.L. 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977).

“Very high radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose that exceeds 5 grays (500 rads) in one hour at one meter from a radiation source or one meter from any surface that the radiation penetrates.

“Waste” (See “Low-level waste”)

“Waste handling licensees” means persons licensed to receive and store radioactive wastes prior to disposal and persons licensed to dispose of radioactive waste.

“Week” means seven consecutive days starting on Sunday.

“Well-bore” means a drilled hole in which wireline service operations and subsurface tracer studies are performed.

“Well-logging” means the lowering and raising of measuring devices or tools which may contain sources of radiation into

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well-bores or cavities for the purpose of obtaining information about the well and adjacent formations.

“Whole body” means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knee.

“Wireline” means an armored cable containing one or more electrical conductors which is used to lower and raise logging tools in the well-bore.

“Wireline service operation” means any evaluation or mechanical service which is performed in the well-bore using devices on a wireline.

“Worker” means any individual engaged in work under a license or registration issued by the Agency and controlled by employment or contract with a licensee or registrant.

“WL” means working level, any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of $1.3E + 5$ MeV of potential alpha particle energy. The short-lived radon daughters are – for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

“WLM” means working level month, an exposure to one working level for 170 hours (2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month).

“Workload” means the degree of use of an x-ray or gamma-ray source per unit time.

“Year” means the period of time beginning in January used to determine compliance with the provisions of these rules. The licensee or registrant may change the starting date of the year used to determine compliance by the licensee or registrant provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

Historical Note

Former Rule Section A.2. Former Section R12-1-102 repealed, new Section R12-1-102 adopted effective June 30, 1977 (Supp. 77-3). Amended effective November 19, 1982 (Supp. 82-6). Amended effective February 25, 1985 (Supp. 85-1). Amended by adding a new paragraph (31), subparagraph (w) and renumbering the former paragraph (31), subparagraphs (w) through (z) accordingly effective November 28, 1986 (Supp. 86-6). Amended by adding a new paragraph (34) and renumbering the former paragraphs (34) through (68) accordingly effective June 26, 1987 (Supp. 87-2). Amended effective April 2, 1990 (Supp. 90-2). Amended effective November 5, 1993 (Supp. 93-4). Amended effective February 18, 1994 (Supp. 94-1). Amended effective August 10, 1994 (Supp. 94-3). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by

final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-103. Exemptions

- A.** Common and contract carriers, freight forwarders, and warehousemen who are subject to 49 CFR 107.109, 107.111, 107.113, 171.2, 171.3, 172.200, 173.1, 173.3, 173.4, 173.401, 175.3, 175.10, 176.3, 176.5, 176.11, 176.24, 176.27, and 177.801, revised October 1, 2007, of the U.S. Department of Transportation, or 39 CFR 111.1 of the U.S. Postal Service, revised July 1, 2007, incorporated by reference, and available under R12-1-101, and who if need be, store radioactive material, for periods of less than 72 hours, in the regular course of their carriage for another, are exempt from this Chapter. The incorporated materials above contain no future editions or amendments.
- B.** Any U.S. Department of Energy contractor or subcontractor and any U.S. Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within this state are exempt from this Chapter to the extent that such contractor or subcontractor under the contract receives, possesses, uses, transfers, or acquires sources of radiation:
1. Prime contractors performing work for the Department of Energy at U.S. Government-owned or controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;
 2. Prime contractors of the Department of Energy performing research or development, manufacture, storage, testing or transportation of nuclear weapons or components thereof;
 3. Prime contractors of the Department of Energy using or operating nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel; and
 4. Any other prime contractor or subcontractor of the Department of Energy or of the Nuclear Regulatory Commission when the state and the Nuclear Regulatory Commission jointly determine:
 - a. That the exemption of the prime contractor or subcontractor is authorized by law; and
 - b. That under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.
- C.** Any licensee who delivers to a carrier for transport any package which contains radioactive material having a specific activity of 74 kBq/kg (2 nanocuries per gram) or less, is exempt from the provisions of this Chapter with respect to that package.

Historical Note

Former Rule Section A.3; Former Section R12-1-103 repealed, new Section R12-1-103 adopted effective June 30, 1977 (Supp. 77-3). Amended effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-104. Prohibited Uses

- A. A person shall not use the following fluoroscopic devices:
 1. Hand-held fluoroscopic screens,
 2. Shoe-fitting fluoroscopic devices.
- B. Except as specifically authorized by law, a person shall not use sources of ionizing radiation for the purpose of screening an individual or inspecting an individual for:
 1. Concealed weapons,
 2. Hazardous materials,
 3. Stolen property, or
 4. Contraband.
- C. Unless there is a medical or dental indication for the exposure and the exposure is prescribed by a licensed practitioner, a person shall not deliberately expose an individual to the useful beam from:
 1. An ionizing radiation machine; or
 2. A non-ionizing radiation source, having a radiation beam known to be harmful to human tissue.

Historical Note

Former Rule Section A.4; Former Section R12-1-104 repealed, new Section R12-1-104 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-104 repealed, new Section R12-1-104 renumbered from R12-1-112 and amended effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-105. Quality Factors for Converting Absorbed Dose to Dose Equivalent

- A. As used in these rules, the quality factors for converting absorbed dose to dose equivalent are shown in Table I.

TABLE I
QUALITY FACTORS AND ABSORBED DOSE
EQUIVALENCIES

TYPE OF RADIATION	Quality Factor (Q)	Absorbed Dose Equal to a Unit Dose Equivalent ^a
X, gamma, or beta radiation and high-speed electrons		1
Alpha particles, multiple-charged particles, fission fragments, and heavy particles of unknown charge	20	0.05
Neutrons of unknown energy	10	0.1
High-energy protons	10	0.1

^aThe absorbed dose in gray is equal to 1 Sv or the absorbed dose in rad is equal to 1 rem.

- B. If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in sievert per hour or rem per hour, 0.01 Sv (1 rem) of neutron radiation of unknown energies may, for purposes of these rules, be assumed to result from a total fluence of 25 million neutrons

per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee or registrant may use the fluence rate per unit dose equivalent or the appropriate Q value from Table II to convert a measured tissue dose in gray or rad to dose equivalent in sievert or rem.

TABLE II
MEAN QUALITY FACTORS, Q, AND FLUENCE PER UNIT DOSE EQUIVALENT FOR MONOENERGETIC NEUTRONS

	Neutron Energy (meV)	Quality Factor (Q)	Fluence per Unit Dose Equivalent ^b (neutrons cm ⁻² r _{em} ⁻¹)	Fluence per Unit Dose Equivalent ^b (neutrons cm ⁻² S _v ⁻¹)
(thermal)	2.5E-8	2	980E+6	980E+8
	1E-7	2	980E+6	980E+8
	1E-6	2	810E+6	810E+8
	1E-5	2	810E+6	810E+8
	1E-4	2	840E+6	840E+8
	1E-3	2	980E+6	980E+8
	1E-2	2.5	1010E+6	1010E+8
	1E-1	7.5	170E+6	170E+8
	5E-1	11	39E+6	39E+8
	1	11	27E+6	27E+8
	2.5	9	29E+6	29E+8
	5	8	23E+6	23E+8
	7	7	24E+6	24E+8
	10	6.5	24E+6	24E+8
	14	7.5	17E+6	17E+8
	20	8	16E+6	16E+8
	40	7	14E+6	14E+8
	60	5.5	16E+6	16E+8
	1E+2	4	20E+6	20E+8
	2E+2	3.5	19E+6	19E+8
	3E+2	3.5	16E+6	16E+8
	4E+2	3.5	14E+6	14E+8

^a Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-centimeter diameter cylinder tissue-equivalent phantom.

^b Monoenergetic neutrons incident normally on a 30-centimeter diameter cylinder tissue-equivalent phantom.

Historical Note

Former Rule Section A.5; Former Section R12-1-105 repealed, new Section R12-1-105 adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2). New Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-106. Units of Activity

For purposes of these rules, activity is expressed in the SI unit of becquerel (Bq) or in the special unit of curie (Ci), or their multiples, or disintegrations or transformations per unit of time. The definitions for these units are located in R12-1-102.

Historical Note

Former Rule Section A.6; Former Section R12-1-1-6

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repealed, new Section R12-1-106 adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2). New Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-107. Misconduct

- A.** A licensee, registrant, applicant for a license or certificate of registration, or employee of a licensee, registrant, or applicant; or any contractor (including a supplier or consultant), subcontractor, or employee of a contractor or subcontractor of any licensee or certificate of registration holder who provides to any licensee, registrant, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's, registrant's, or applicant's activities in this Chapter, shall not:
1. Knowingly engage in conduct that violates or will result in a violation by a licensee, registrant, or applicant, of any statute, rule, regulation, or order; or any term, condition, or limitation of any license or registration issued by the Agency; or
 2. Knowingly submit to the Agency, or a licensee, registrant, or applicant, or a licensee's, registrant's, or applicant's contractor or subcontractor, information that is incomplete or inaccurate.
- B.** The Board shall impose the applicable civil penalty listed in R12-1-1216 on a person who violates subsection (A)(1) or (A)(2). For this purpose the person is classified as a Division II licensee and the violation is classified as a Severity II violation.
- C.** For the purposes of this Section, "misconduct" means conduct prohibited under subsection (A).
- D.** A person who is not a licensee, registrant, or applicant and knowingly violates a rule for the safe use of radiation sources in 12 A.A.C.1 is subject to the enforcement actions in 12 A.A.C. 1, Article 12.

Historical Note

Former Rule Section A.7; Former Section R12-1-107 repealed, new Section R12-1-107 adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2). New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-108. Repealed**Historical Note**

Former Rule Section A.8; Former Section R12-1-108 repealed, new Section R12-1-108 adopted effective June 30, 1977 (Supp. 77-3). Change of address (Supp. 85-6). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-109. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-110. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-111. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed effective April 2, 1990 (Supp. 90-2).

R12-1-112. Renumbered**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-112 renumbered to R12-1-104 effective April 2, 1990 (Supp. 90-2).

Appendix A. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 10, 1994 (Supp. 94-3).

Appendix B. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 10, 1994 (Supp. 94-3).

ARTICLE 2. REGISTRATION, INSTALLATION, AND SERVICE OF IONIZING RADIATION-PRODUCING MACHINES; AND CERTIFICATION OF MAMMOGRAPHY FACILITIES

R12-1-201. Exemptions

- A.** Electronic equipment that produces X-radiation incidental to its operation for other purposes is exempt from the registration and notification requirements of this Article, provided that an exposure rate, from any accessible surface, averaged over an area of 10 centimeters squared (1.55 inches squared) does not exceed 5 microsieverts (0.5 milliroentgen) per hour at 5 centimeters (2.0 inches).
- B.** The production, testing, or factory servicing of the electronic equipment in subsection (A) is not exempt from the requirements of this Article.
- C.** Radiation machines in storage or in transit to or from storage are exempt from the requirements of this Article.
- D.** Radiation machines rendered incapable of producing radiation are exempt from the requirements of this Article.

Historical Note

Former Rule Section B.3. Former Section R12-1-203 repealed, new Section R12-1-203 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-201 repealed, former Section R12-1-203 renumbered as R12-1-201 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-202. Application for Registration of Ionizing Radiation Producing Machines

- A.** A person shall not use a radiation machine except as authorized in this Article.
- B.** A person possessing a nonexempt radiation machine shall apply for registration of the machine with the Agency within 30 days after its installation. The person applying for registration of a radiation-producing machine shall use the application forms provided by the Agency. The applicant shall provide the information identified in Appendix A of this Article.
- C.** In addition to the application form or forms, the applicant shall remit the appropriate registration or licensing fee in R12-1-1306 and provide other information required by R12-1-208.
- D.** Each applicant that applies for registration of a stationary x-ray system, with the exception of applicants from bone densitometry, cabinet radiography, podiatry, dental, bone mineral analyzer and mammography facilities, shall provide a scale

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drawing of the room in which the x-ray system is located, or provide measurements from the radiation source to the surrounding barrier surfaces. The drawing shall denote the type of materials and the thickness (or lead equivalence) of each barrier of the room (walls, ceilings, floors, doors, windows). The drawing shall also denote the type and frequency of occupancy in adjacent areas, including those above and below the x-ray room of concern (e.g., hallways, offices, parking lots, and lavatories). Estimates of workload shall also be provided with the drawing.

- E.** An applicant proposing to use a particle accelerator for medical purposes shall not use the particle accelerator until the Agency inspection required in R12-1-914 has been completed.

Historical Note

Former Rule Section B.4. Former Section R12-1-204 repealed, new Section R12-1-204 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-202 repealed, former Section R12-1-204 renumbered as R12-1-202 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective June 11, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-203. Application for Registration of Servicing and Installation

- A.** Each person who is engaged in the business of installing or offering to install radiation machines shall apply for registration. For purposes of this Chapter, install includes selling and servicing, or offering to sell or service, x-ray machines in Arizona.
- B.** The applicant shall complete the application for registration on forms that request information required by A.R.S. § 30-672.01, provided by the Agency.

Historical Note

Former Rule Section B.5. Former Section R12-1-205 repealed, new Section R12-1-205 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-205 renumbered as R12-1-203 and amended effective November 22, 1988 (Supp. 88-4). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-204. Issuance of Notice of Registration

- A.** Upon determining that the application meets the requirements of the Act and this Article, the Agency shall issue a Notice of Registration.
- B.** All radiation machines located at the same facility may be registered using one Notice of Registration.

Historical Note

Former Rule Section B.6. Former Section R12-1-206 repealed, new Section R12-1-206 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-206 renumbered as R12-1-204 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2).

R12-1-205. Expiration of Notice of Registration or Certification

- A.** Except as provided in subsection (B), a Notice of Registration, issued according to R12-1-204, or a certificate issued accord-

ing to R12-1-208, expires at the end of the day on the expiration date stated in the Notice of Registration or certificate.

- B.** If an application for renewal is filed by the registrant or certificate holder not less than 30 days prior to the expiration of the Notice of Registration or certificate, the Notice of Registration or certificate does not expire until a final determination is made by the Agency on the renewal application.

Historical Note

Former Rule Section B.7. Former Section R12-1-207 repealed, new Section R12-1-207 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-207 renumbered as R12-1-205 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-206. Assembly, Installation, Removal from Service, and Transfer

- A.** A person who assembles, or installs ionizing radiation machines in this state shall notify the Agency in writing within 15 days of:
1. The name and address of the person possessing the machine that was assembled or installed;
 2. The manufacturer, model, and serial number of each radiation machine with the tube housing model number and serial number, maximum kVp, and maximum mA, assembled or installed; and
 3. The date each machine was assembled or installed, or the first clinical procedure is performed.
- B.** Any person who possesses a radiation machine registered by the Agency shall notify the Agency within 15 days of the machine being taken out of service. The written notification shall contain the name and address of the person receiving the machine, if it is sold, leased, or transferred to another person; the manufacturer, model, and serial number of the machine; and the date the machine was taken out of service.
- C.** In the case of diagnostic x-ray systems that contain certified components, an assembler shall, within 15 days following completion of the assembly, submit to the Agency a copy of the assembler's report (FDA Report No. 2579) prepared in compliance with requirements in 21 CFR 1020.30(d), revised April 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The report shall suffice in lieu of any other report by the assembler, if it contains the information required in subsection (A).
- D.** A person shall not make, sell, lease, transfer, lend, assemble, service, or install radiation machines or the supplies used in connection with radiation machines unless the supplies and equipment when properly placed in operation and used, meet the requirements of these rules.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-209 renumbered as Section R12-1-206 and amended effective November 22, 1988 (Supp. 88-4). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-207. Reciprocal Recognition of Out-of-state Radiation Machines

- A.** If any radiation machine is to be brought into the state for temporary use, the person proposing to bring the radiation machine into the state shall provide written notice to the Agency at least three working days before the radiation machine is to be used in the state. The notice shall include the type of radiation machine; the nature, duration, and scope of use; and the exact location where the radiation machine is to be used. If, for a specific case, the three working-day period would impose an undue hardship, the person may upon application to the Agency, obtain permission to proceed sooner.
- B.** In addition, the owner of the radiation machine and the person possessing the machine while in the state shall:
1. Comply with all applicable rules of the Agency;
 2. Upon request, supply the Agency with a copy of the machine's registration and other information regarding the safe operation of the machine while it is in the state; and
 3. Upon request, supply the Agency with the work authorization from the Agency, machine registration, operating and emergency procedures, utilization log, survey instrument and associated calibration record, and training records for all users.
- C.** A radiation machine shall not be operated within the state on a temporary basis in excess of 180 calendar days per year.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-210 renumbered as Section R12-1-207 and amended effective November 22, 1988 (Supp. 88-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-208. Certification of Mammography Facilities

An applicant seeking certification of a facility according to A.R.S. § 30-672(J) shall:

1. Provide evidence with the application that a quality assurance program has been established and is in use under R12-1-614(B)(1) and (2),
2. Provide evidence with the application that physicians reading mammographic images have the training and experience required in A.R.S. § 32-2842, and
3. Provide evidence with the application that physicians reading mammographic images have met the minimum criteria established by their respective licensing boards, as required in A.R.S. § 32-2842(C).

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective November 22, 1988 (Supp. 88-4). New Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Corrected subsection (1) by adding reference to R12-1-614(B)(1) and (2), which was inadvertently omitted in 03-3 rulemaking (Supp. 14-1).

R12-1-209. Notifications

- A.** A registrant shall notify the Agency within 30 days of any change to the information contained in the notice of registration or a certificate issued according to R12-1-208.
- B.** A person who possesses a radiation machine registered by the Agency shall notify the Agency within 15 days if the machine is discarded or transferred to another person. In the notice, the person shall provide the name and address of the person who

receives the machine, if it is sold, leased, or transferred to another person; the manufacturer, model, and serial number of the machine; and the date the machine was taken out of service.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix A. Application Information

An application shall contain the following information as required in R12-1-202(B), before a registration will be issued. The Agency shall provide an application form to an applicant with a guide, if available, or shall assist the applicant to ensure that only correct information is provided on the application.

Name and mailing address of applicant	Use location
Person responsible for radiation safety program	Telephone number
Type of facility	Facility subtype
Legal structure and ownership	Signature of certifying agent
Radiation machine information	Equipment identifiers
Shielding information	Scale drawing, if applicable
Equipment operator instructions and restrictions	Physicist name and training, if applicable
Classification of professional in charge	
Record of calibration for therapy units	Type of request: amendment, new, or renewal
Protection survey results, if applicable	
Type of industrial radiography program, if applicable	
Radiation Safety Officer name, if applicable	Contact person
Other registration requirements listed in Articles 2, 6, 8, 9, and 11	Appropriate fee listed in Article 13 schedule

Historical Note

Appendix repealed; new Appendix made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

ARRA-4. Repealed**Historical Note**

Appendix A, Form ARRA-4 adopted effective November 22, 1988 (Supp. 88-4). Appendix A, Form ARRA-4 repealed, new Form ARRA-4 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4X. Repealed**Historical Note**

Form ARRA-4X adopted effective April 17, 1996 (Supp.

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96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4XT. Repealed**Historical Note**

Form ARRA-4XT adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4PAT. Repealed**Historical Note**

Form ARRA-4PAT adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4IG. Repealed**Historical Note**

Form ARRA-4IG adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4IR. Repealed**Historical Note**

Form ARRA-4IR adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4PAR. Repealed**Historical Note**

Form ARRA-PAR adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-4PA. Repealed**Historical Note**

Form ARRA-4PA adopted effective April 17, 1996 (Supp. 96-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

ARRA-13. Repealed**Historical Note**

Form ARRA-13 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1004. Repealed**Historical Note**

Form ARRA-1004 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1005. Repealed**Historical Note**

Form ARRA-1005 adopted effective April 17, 1996

(Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1030. Repealed**Historical Note**

Form ARRA-1030 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1050. Repealed**Historical Note**

Form ARRA-1050 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1070. Repealed**Historical Note**

Form ARRA-1070 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARRA-1090. Repealed**Historical Note**

Form 1090 adopted effective April 17, 1996 (Supp. 96-2). Repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

ARTICLE 3. RADIOACTIVE MATERIAL LICENSING**R12-1-301. Ownership, Control, or Transfer of Radioactive Material**

- A.** In addition to the requirements of this Article, all licensees are subject to the requirements of 12 A.A.C. 1, Article 1, Article 4, and Article 10. Licensees engaged in industrial radiographic operations are subject to the requirements of 12 A.A.C. 1, Article 5; licensees using radioactive material in the practice of medicine are subject to the requirements of 12 A.A.C. 1, Article 7; licensees transporting radioactive material are subject to the requirements contained in 12 A.A.C. 1, Article 15; and licensees using radioactive material in well logging operations are subject to the requirements in 12 A.A.C. 1, Article 17.
- B.** Notwithstanding any other provisions of this Article, any person may own radioactive material, provided that the ownership does not include the actual possession, custody, use, or physical transfer of radioactive material or the manufacture or production of any article that contains radioactive material without the applicable certification, license, or registration.
- C.** A manufacturer, processor, or producer of any equipment, device, commodity, or other product that contains source material or radioactive material whose subsequent possession, use, transfer, or disposal by all other persons is exempt from regulatory requirements may only obtain authority to transfer possession or control of the material from the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Historical Note

Former Rule Section C.1. Former Section R12-1-301 repealed, new Section R12-1-301 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-301 renumbered to R12-1-322, new Section R12-1-301 adopted effective February 18, 1994 (Supp. 94-1). Former Section R12-1-301 repealed; new Section R12-1-301 renumbered from R12-1-302 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

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R12-1-302. Source Material; Exemptions

- A.** Any person is exempt from this Article to the extent the person receives, possesses, uses, delivers or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than 1/20th of 1 percent (0.0005) of the mixture, compound, solution, or alloy.
- B.** Any person is exempt from this Article to the extent the person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material, provided that, the person does not refine or process the ore except as authorized in a specific license.
- C.** Any person is exempt from this Article if the person receives, possesses, uses, or transfers:
1. Any quantities of thorium contained in:
 - a. Incandescent gas mantles;
 - b. Vacuum tubes;
 - c. Welding rods;
 - d. Electric lamps for illuminating purposes provided that each lamp does not contain more than 50 milligrams of thorium;
 - e. Germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting, provided that each lamp does not contain more than 2 grams of thorium;
 - f. Rare earth metals, compounds, mixtures, or products containing not more than 0.25 percent by weight thorium, uranium, or any combination of thorium and uranium; or
 - g. Individual neutron dosimeters, provided that each dosimeter does not contain more than 50 milligrams of thorium;
 2. Source material contained in the following products:
 - a. Glazed ceramic tableware, provided that the glaze contains not more than 20 percent source material by weight;
 - b. Glassware, glass enamel and glass enamel frit containing not more than 10 percent source material by weight, but not including commercially manufactured glass brick, pane glass, ceramic tile or other glass, glass enamel or ceramic used in construction; or
 - c. Piezoelectric ceramic containing not more than 2 percent source material by weight;
 3. Photographic film, negatives, and prints containing uranium or thorium;
 4. Any finished product or part fabricated of, or containing, tungsten-thorium or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed 4 percent by weight and that the exemption contained in this subsection does not authorize the chemical, physical, or metallurgical treatment or processing of the finished product or part;
 5. Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of counterweights, provided that:
 - a. The counterweights are manufactured in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, authorizing distribution by the licensee according to 10 CFR 40;
 - b. Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "DEPLETED URANIUM";
 - c. Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED"; and
 - d. The exemption contained in this item does not authorize the chemical, physical, or metallurgical treatment or processing of any counterweight other than repair or restoration of any plating or other covering; and
 - e. The requirements specified in subsections (C)(5)(b) and (c) do not apply to counterweights manufactured prior to December 31, 1969; provided, that these counterweights are impressed with the legend, "CAUTION – RADIOACTIVE MATERIAL – URANIUM."
6. Natural or depleted uranium metal used as shielding and constituting part of any shipping container; provided that:
- a. The shipping container is conspicuously and legibly impressed with the legend "CAUTION – RADIOACTIVE SHIELDING – URANIUM," and
 - b. The uranium metal is encased in mild steel or equally fire resistant metal with minimum wall thickness of 1/8 inch (3.2 mm).
7. Thorium contained in finished optical lenses, provided that each lens does not contain more than 30 percent of thorium by weight, and that the exemption contained in this item does not authorize either:
- a. The shaping, grinding, or polishing of a thoriated lens or manufacturing processes other than the assembly of a thoriated lens into optical systems and devices without any alteration of the lens; or
 - b. The receipt, possession, use, or transfer of thorium contained in contact lenses, spectacles, or the eye-pieces of binoculars or other optical instruments;
8. Uranium contained in detector heads of fire detection units, provided that each detector head contains not more than 5 nanocuries (185 Bq) of uranium; or
9. Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:
- a. The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide), and
 - b. The thorium content in the nickel-thoria alloy does not exceed 4 percent by weight.
- D.** The exemptions in subsection (C) do not authorize the manufacture of any of the products described.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended subsection (C) effective November 22, 1988 (Supp. 88-4). Former Section R12-1-302 renumbered to R12-1-303, new Section R12-1-302 renumbered from R12-1-301 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-302 renumbered to R12-1-301; new Section R12-1-302 renumbered from R12-1-303 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-303. Radioactive Material Other Than Source Material; Exemptions

- A.** Exempt concentrations
1. Except as provided in subsection (A)(3) and (A)(4), any person is exempt from this Article if the person receives, possesses, uses, transfers, owns, or acquires products or materials containing radioactive material in concentrations not in excess of those listed in Exhibit A.
 2. This Section shall not be deemed to authorize the import of radioactive material or products containing radioactive material.

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3. A manufacturer, processor, or producer of a product or material is exempt from the requirements for a license issued under R12-1-311(A) or the requirements of this Article to the extent that this person transfers radioactive material contained in a product or material in concentrations not in excess of those specified in Exhibit A of this Article and introduced into the product or material by a licensee holding a specific license issued by the NRC expressly authorizing such introduction. This exemption does not apply to the transfer of radioactive material contained in any food, beverage, cosmetic, drug, or other commodity or product designed for ingestion or inhalation by, or application to, a human being.
 4. A person shall not introduce radioactive material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under subsection (A)(1) or equivalent Regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State, except in accordance with a license issued under 10 CFR 32.11.
- B. Exempt items**
1. Except for persons who apply radioactive material to, or persons who incorporate radioactive material into the following products, or persons who initially transfer for sale or distribution the following products, a person is exempt from this Chapter to the extent that the person receives, possesses, uses, transfers, owns, or acquires the following products:
 - a. Timepieces, hands, or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:
 - i. 925 megabecquerels (25 millicuries) of tritium per timepiece,
 - ii. 185 megabecquerels (5 millicuries) of tritium per hand,
 - iii. 555 megabecquerels (15 millicuries) of tritium per dial (bezels when used shall be considered part of the dial),
 - iv. 3.7 megabecquerels (100 microcuries) of promethium-147 per watch or 7.4 megabecquerels (200 microcuries) of promethium-147 per any other timepiece,
 - v. 740 kBq (20 microcuries) of promethium-147 per watch hand or 1.48 megabecquerels (40 microcuries) of promethium-147 per other timepiece hand,
 - vi. 2.22 megabecquerels (60 microcuries) of promethium-147 per watch dial or 4.44 MBq (120 microcuries) of promethium-147 per other timepiece dial (bezels, when used, shall be considered part of the dial),
 - vii. The levels of radiation from hands and dials containing promethium-147 shall not exceed, when measured through 50 milligrams per square centimeter of absorber:
 - (1) For wrist watches, 1.0 μ Gy (0.1 millirad) per hour at 10 centimeters from any surface of the watch;
 - (2) For pocket watches, (0.1 millirad) per hour at 1 centimeter from any surface;
 - (3) For any other timepiece, 2.0 μ Gy (0.2 millirad) per hour at 10 centimeters from any surface;
 - viii. 37 kBq (1 microcurie) of radium-226 per timepiece in intact timepieces manufactured prior to November 30, 2007;
 - b. Static elimination devices which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 18.5 MBq (500 μ Ci) of polonium-210 per device.
 - i. Ion generating tubes designed for ionization of air that contain, as a sealed source or sources, radioactive material consisting of a total of not more than 18.5 MBq (500 μ Ci) of polonium-210 per device or of a total of not more than 1.85 GBq (50 mCi) of hydrogen-3 (tritium) per device.
 - ii. Such devices authorized before October 23, 2012 for use under the general license then provided in R12-1-306 and equivalent regulations of the NRC or Agreement State and manufactured, tested, and labeled by the manufacturer in accordance with the specifications contained in a specific license issued by the NRC.
 - c. Balances of precision containing not more than 37 megabecquerels (1 millicurie) of tritium per balance or not more than 18.5 megabecquerels (0.5 millicurie) of tritium per balance part manufactured before December 17, 2007;
 - d. Marine compasses containing not more than 27.75 gigabecquerels (750 millicuries) of tritium gas and other marine navigational instruments containing not more than 9.25 gigabecquerels (250 millicuries) of tritium gas manufactured before December 17, 2007;
 - e. Ionization chamber smoke detectors containing not more than 37 kBq (1 microcurie) of americium-241 per detector in the form of a foil and designed to protect life and property from fires;
 - f. Electron tubes: Provided that each tube does not contain more than one of the following specified quantities of radioactive material:
 - i. 5.55 GBq (150 millicuries) of tritium per microwave receiver protector tube or 370 megabecquerels (10 millicuries) of tritium per any other electron tube;
 - ii. 37 kBq (1 microcurie) of cobalt 60;
 - iii. 185 kBq (5 microcuries) of nickel 63;
 - iv. 1.11 megabecquerels (30 microcuries) of krypton 85;
 - v. 185 kBq (5 microcuries) of cesium 137;
 - vi. 1.11 megabecquerels (30 microcuries) of promethium-147;
 - vii. And provided further, that the level of radiation due to radioactive material contained in each electron tube does not exceed 10 μ Gy (1 millirad) per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber. The term "electron tubes" includes spark gap tubes, power tubes, gas tubes, including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical current;
 - g. Ionizing radiation measuring instruments containing, for purposes of internal calibration or standard-

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- ization, one or more sources of radioactive material provided that:
- i. Each source contains no more than one exempt quantity set forth in Exhibit B of this Article; and
 - ii. Each instrument contains no more than 10 exempt quantities. For the purposes of this subsection, an instrument's source or sources may contain either one type or different types of radionuclide and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in Exhibit B of this Article, provided the sum of the fractions do not exceed unity;
 - iii. For the purposes of subsection (B)(1)(h) only, 185 kBq (50 nanocurie) of americium-241 is considered an exempt quantity under Exhibit B of this Article;
- h. Any person who desires to apply radioactive material to, or to incorporate radioactive material into, the products exempted in subsection (B)(1)(a), or who desires to initially transfer for sale or distribution such products containing radioactive material, should apply for a specific license pursuant to R12-1-311 of this Article, which license states that the product may be distributed by the licensee to persons exempt from the rules pursuant R12-1-303 (A)(1).
2. Self-luminous products containing tritium, krypton-85, or promethium-147:
 - a. Except for persons who manufacture, process, produce, initially transfer for sale or distribution self-luminous products containing tritium, krypton-85, or promethium-147, and except as provided in paragraph (c) of this subsection, a person is exempt from this Chapter if the person receives, possesses, uses, owns, transfers or acquires tritium, krypton-85 or promethium-147 in self-luminous products manufactured, processed, produced, imported, initially transferred for sale or distribution, or transferred under a specific license issued by the U.S. Nuclear Regulatory Commission and described in 10 CFR 32.22, and the license authorizes the transfer of the products to persons who are exempt from regulatory requirements.
 - b. Any person who desires to manufacture, process, or produce, or initially transfer for sale or distribution self-luminous products containing tritium, krypton-85, or promethium-147 for use under paragraph (a) of this subsection, should apply for a license described in R12-1-311.
 - c. The exemption in paragraph (a) of this subsection does not apply to tritium, krypton-85, or promethium-147 used in products for primarily frivolous purposes or in toys or adornments.
 - d. A person is exempt from this Chapter if the person receives, possesses, uses, or transfers articles containing less than 3.7 kBq (100 nanocuries) of radium-226, manufactured prior to October 1, 1978.
 3. Gas and aerosol detectors containing radioactive material
 - a. Except for persons who manufacture, process, produce, or initially transfer for sale or distribution gas and aerosol detectors containing radioactive material, a person is exempt from this Chapter if the person receives, possesses, uses, transfers, owns, or acquires radioactive material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards, provided that detectors containing radioactive material shall be manufactured, imported, or transferred according to a specific license issued by the U.S. Nuclear Regulatory Commission and described in 10 CFR 32.26, or equivalent regulations of an Agreement or Licensing State, this exemption also covers gas and aerosol detectors manufactured or distributed before November 30, 2007 in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, or equivalent regulations of an Agreement or Licensing State and the license authorizes the transfer of the detectors to persons who are exempt from regulatory requirements.
 - b. Any person who desires to manufacture, process, or produce gas and aerosol detectors containing byproduct material, or to initially transfer such products for use under paragraph (a) of this subsection, should apply for a license described in R12-1-311.
 - c. Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an Agreement State are exempt under subsection (B)(4)(a), provided that the device is labeled in accordance with the specific license authorizing distribution of the general licensed device, and that the detectors meet the requirements of the regulations of the U.S. Nuclear Regulatory Commission.
 4. Certain industrial devices
 - a. Except for persons who manufacture, process, produce, or initially transfer for sale or distribution industrial devices containing byproduct material designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing an ionized atmosphere, any person is exempt from the requirements for a license set forth in this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires byproduct material, in these certain detecting, measuring, gauging, or controlling devices and certain devices for producing an ionized atmosphere, and manufactured, processed, produced, or initially transferred in accordance with a specific license issued under R12-1-311 of this Article, which license authorizes the initial transfer of the device for use under this section. This exemption does not cover sources not incorporated into a device, such as calibration and reference sources.
 - b. Any person who desires to manufacture, process, produce, or initially transfer, for sale or distribution, industrial devices containing byproduct material for use under paragraph (1) of this subsection, shall apply for a license described in R12-1-311.
- C. Exempt quantities
1. Except as provided in subsections (C)(2), (3), and (7), a person is exempt from this Chapter if the person receives, possesses, uses, transfers, owns, or acquires radioactive material in individual quantities each of which does not exceed the applicable quantity set forth in Exhibit B of this Article.
 2. This subsection does not authorize the production, packaging, or repackaging or transfer of radioactive material for purposes of commercial distribution, or the incorpora-

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tion of radioactive material into products intended for commercial distribution.

3. Except as specified in this subsection, a person shall not, for purposes of commercial distribution, transfer radioactive material in the individual quantities set forth in Exhibit B of this Article, knowing or having reason to believe the described quantities of radioactive material will be transferred to persons exempt under subsection (C) or equivalent regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State. A person may transfer radioactive material for commercial distribution under a specific license issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.18 which license states that the radioactive material may be transferred by the licensee to persons exempt under this subsection or the equivalent regulations of the U.S. Nuclear Regulatory Commission or any Agreement State or Licensing State.
4. Sources containing exempt quantities of radioactive material shall not be bundled or placed in close proximity for the purpose of using the radiation from the combined sources in place of a single source, containing a licensable quantity of radioactive material.
5. Possession and use of bundled or combined sources containing exempt quantities of radioactive material in unregistered devices by persons exempt from licensing is prohibited.
6. Any person, who possesses radioactive material received or acquired before September 25, 1971, under the general license issued under R12-1-311(A) of this Article or similar general license of an Agreement State or the NRC, is exempt from the requirements for a license issued under R12-1-311(A) of this Article to the extent that this person possesses, uses, transfers, or owns radioactive material.
7. No person may, for purposes of producing an increased radiation level, combine quantities of radioactive material covered by the exemption described in subsection (C)(6) so that the aggregate quantity exceeds the limits set forth in Exhibit B, except for radioactive material combined within a device placed in use before May 3, 1999, or as otherwise permitted by the rules in this Section.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-303 renumbered to R12-1-304, new Section R12-1-303 renumbered from R12-1-302 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-303 renumbered to R12-1-302; new Section R12-1-303 renumbered from R12-1-304 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-304. License Types

- A. Activities requiring license. Except as provided in 10 CFR 30.3 (revised January 1, 2013, incorporated by reference, and available under R12-1-101; this incorporated material contains no future editions or amendments) this Section and for persons exempt as provided in R12-1-302 and R12-1-303 of this Article,

no person shall manufacture, produce, transfer, receive, acquire, own, possess, or use byproduct material except as authorized in a specific or general license issued in accordance with the regulations in this chapter and in accordance with 10 CFR 30.3.

- B. Licenses for radioactive materials are of two types: general and specific.
 1. A general license is provided by rule, grants authority to a person for certain activities involving radioactive material, and is effective without the filing of an application with the Agency or the issuance of a licensing document to a particular person. However, registration with the Agency may be required by the particular general license.
 2. The Agency issues a specific license to a named person who has filed an application for a license under the applicable provision of this Chapter. A specific licensee is subject to all of the applicable rules in this Chapter and any limitation contained in the license document.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-304 renumbered to R12-1-305, new Section R12-1-304 renumbered from R12-1-303 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-304 renumbered to R12-1-303; new Section R12-1-304 renumbered from R12-1-305 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-305. General Licenses – Source Material

- A. This subsection grants a general license that authorizes commercial and industrial firms; research, educational, and medical institutions; and state and local government agencies to use, and transfer not more than 6.8 kg (15 pounds) of source material at any one time for research, development, educational, commercial, or operational purposes. A person authorized under this subsection shall not receive more than 68.2 kg (150 pounds) of source material in one calendar year.
- B. A person who receives, possesses, uses, or transfers source material under a general license granted under subsection (A) is exempt from the provisions of 12 A.A.C. 1, Article 4 and Article 10, provided the receipt, possession, use, or transfer is within the terms of the general license. This exemption does not apply to any person who is also in possession of source material under a specific license issued under this Article.
- C. This subsection grants a general license that authorizes a person to receive acquire, possess, use, or transfer depleted uranium contained in industrial products and devices provided:
 1. The depleted uranium is contained in the industrial product or device for the purpose of providing a concentrated mass in a small volume of the product or device;
 2. The industrial products or devices have been manufactured or initially transferred in accordance with a specific license governed by R12-1-311(M), or a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State that authorizes manufacture of the products or devices for distribution to persons generally licensed by the U.S. Nuclear Regulatory Commission or an Agreement State;
 3. The person files an ARRA 23 “Registration Certificate -- Use of Depleted Uranium Under General License” with the Agency. The person shall provide the information requested on the certificate and listed in Exhibit E. The

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person shall submit the information within 30 days after first receipt or acquisition of the depleted uranium, returning the completed registration certificate to the Agency. The person shall report in writing to the Agency any change in information originally submitted to the Agency on ARRA 23. The person shall submit the change report within 30 days after the effective date of the described change.

D. A person who receives, acquires, possesses, or uses depleted uranium according to the general license provided under subsection (C) shall:

1. Not introduce depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium;
2. Not abandon the depleted uranium;
3. Transfer the depleted uranium as prescribed in R12-1-318. If the transferee receives the depleted uranium under a general license established by subsection (C), the transferor shall furnish the transferee with a copy of this Section and a copy of the registration certificate. If the transferee receives the depleted uranium under a general license governed by a regulation of the U.S. Nuclear Regulatory Commission or an Agreement State that is equivalent to subsection (C), the transferor shall furnish the transferee a copy of the equivalent rule and a copy of the registration certificate, accompanied by a letter explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or an Agreement State under requirements substantially similar to those in this Section;
4. Within 30 days of any transfer, report in writing to the Agency the name and address of the person receiving the depleted uranium; and
5. Not export depleted uranium except under a license issued by the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 110.

E. A person who receives, acquires, possesses, uses, or transfers depleted uranium in accordance with a general license granted under subsection (C) is exempt from the requirements of 12 A.A.C. 1, Articles 4 and 10 with respect to the depleted uranium covered by that general license.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-305 renumbered to R12-1-306, new Section R12-1-305 renumbered from R12-1-304 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-305 renumbered to R12-1-304; new Section R12-1-305 renumbered from R12-1-306 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-306. General License – Radioactive Material Other Than Source Material

A. Certain measuring, gauging or controlling devices and certain devices for producing light or an ionized atmosphere.

1. This subsection grants a general license to a commercial or industrial firm; a research, educational or medical institution; an individual conducting business; or a state or local government agency to receive, acquire, possess, use, or transfer radioactive material contained in devices designed and manufactured for the purpose of detecting,

measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere, according to the provisions of 10 CFR 31.5(b), (c), and (d), (Revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.

2. A general licensee shall receive a device from one of the specific licensees described in this Section or through a transfer made under subsection (A)(4)(k).

3. A general license in subsection (A)(1) applies only to radioactive material contained in devices that have been manufactured or initially transferred and labeled in accordance with the requirements contained in:

- a. A specific license issued under R12-1-311(A), or
- b. An equivalent specific license issued by the NRC or another Agreement State.
- c. An equivalent specific license issued by a State with rules or regulations comparable to this Section.

4. A person who acquires, receives, possesses, uses, or transfers radioactive material in a device licensed under subsection (A)(1) or through a transfer made under subsection (A)(4)(h), shall:

- a. Ensure that all labels and safety statements affixed to a device at the time of receipt and bearing a statement that removal of the label is prohibited are maintained and not removed, and comply with all instructions and precautions on the labels.
- b. Ensure that the device is tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at other intervals as specified on the label.
 - i. A general licensee need not test a device that contains only krypton for leakage of radioactive material; and
 - ii. A general licensee need not test a device for leakage of radioactive material if the device contains only tritium, not more than 3.7 megabecquerels (100 microcuries) of other beta and/or gamma emitting material, or 370 kilobecquerels (10 microcuries) of alpha emitting material, or the device is held in storage, in the original shipping container, before initial installation.
- c. Ensure that the tests required by subsection (A)(4)(b) and other testing, installation, servicing, and removal from installation involving the radioactive material or its shielding or containment, are performed:
 - i. In accordance with the device label instructions, or
 - ii. By a person holding a specific license under R12-1-311(A) or in accordance with the provisions of a specific license issued by the NRC or an Agreement State which authorizes distribution of devices to persons generally licensed by the NRC or an Agreement State.
- d. Maintain records of compliance with the requirements in subsections (A)(4)(b) and (c) that show the results of tests; the dates that required activities were performed, and the names of persons performing required activities involving radioactive material from the installation and its shielding or containment. The records shall be maintained for three

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- years from the date of the recorded event or until transfer or disposal of the device.
- e. Immediately suspend operation of a device if there is a failure of, or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on-off mechanism or indicator, or upon the detection of 185 becquerel (0.005 microcurie) or more of removable radioactive material.
 - i. A general licensee shall not operate the device until it has been repaired by the manufacturer or another person holding a specific license to repair this type of device that was issued by the Agency under R12-1-311(A), the NRC, or an Agreement State which authorizes distribution of devices to persons generally licensed by the NRC or an Agreement State.
 - ii. If necessary the general licensee shall dispose of the device and any radioactive material from the device by transfer to a person authorized by a specific license to receive the radioactive material in the device or as otherwise approved by the Agency.
 - iii. Within 30 days of an event governed by subsection (A)(4)(e) the general licensee shall furnish a report that contains a brief description of the event and the remedial action taken and, in the case of detection of 185 Becquerel (0.005 microcurie) or more of removable radioactive material or failure of or damage to a source likely to result in contamination of the general licensee's facility or the surrounding area, if applicable, a plan for ensuring that the general licensee's facility and surrounding area, if applicable, are acceptable for unrestricted use. The radiological criteria for unrestricted use in R12-1-452 may be used to prepare the plan, as determined by the Agency, on a case-by-case basis.
 - f. Not abandon a device that contains radioactive material.
 - g. Not export a device that contains radioactive material except in accordance with 10 CFR 110, revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.
 - h. Transfer or dispose of a device that contains radioactive material only by export as authorized in subsection (A)(4)(g), transfer to another general licensee as authorized in subsection (A)(4)(k) or a person who is authorized to receive the device by a specific license issued by the Agency, the NRC, or an Agreement State, or collection as waste if authorized by equivalent regulations of an Agreement State, or the NRC, or as otherwise approved under subsection (A)(4)(j).
 - i. Within 30 days after the transfer or export of a device to a specific licensee, furnish a report to the Agency. The report shall:
 - i. Identify the device by manufacturer's (or initial transferor's) name, model number, and serial number;
 - ii. Provide the name, address, and license number of the person receiving the device (license number not applicable if exported); and
 - iii. Provide the date of transfer or export.
 - j. Obtain written Agency approval before transferring a device to any other specific licensee that is not authorized in accordance with subsection (A)(4)(h).
 - k. Transfer a device to another general licensee only:
 - i. If the device remains in use at a particular location. The transferor shall provide the transferee with a copy of this Section, a copy of R12-1-443, R12-1-445, and R12-1-448 and any safety documents identified on the device label. Within 30 days of the transfer, the transferor shall report to the Agency the manufacturer's (or initial transferor's) name; the model number and the serial number of the device transferred; the transferee's name and mailing address for the location of use; and the name, title, and telephone number of the responsible individual appointed by the transferee in accordance with subsection (A)(4)(n); or
 - ii. If the device is held in storage in the original shipping container at its intended location of use before initial use by a general licensee, and by a person that is not a party to the transaction.
 - l. Comply with the provisions of R12-1-443, R12-1-444, R12-1-445, R12-1-447, and R12-1-448 for reporting and notification of radiation incidents, theft or loss of licensed material, and is exempt from the other requirements of 12 A.A.C. 1, Articles 4 and 10.
 - m. Respond to written requests from the Agency to provide information relating to the general license within 30 days from the date on the request, or a longer time period specified in the request. If the general licensee cannot provide the requested information within the specified time period, the general licensee shall request a longer period to supply the information before expiration of the time period, providing the Agency with a written justification for the request.
 - n. Appoint an individual responsible for knowledge of applicable laws and possessing the authority to take actions required to comply with applicable radiation safety laws. The general licensee, through this individual, shall ensure the day-to-day compliance with applicable radiation safety laws. This provision does not relieve the general licensee of responsibility.
 - o. Register, in accordance with subsections (A)(4)(p) and (q), any device that contains at least 370 megabecquerels (10 millicuries) of cesium-137, 3.7 megabecquerels (0.1 millicuries) of strontium-90, 37 megabecquerels (1 millicurie) of cobalt-60, or 37 megabecquerels (1 millicurie) of americium-241 or any other transuranic (i.e., element with atomic number greater than uranium (92)), based on the activity indicated on the label. Each address for a location of use, as described under subsection (A)(4)(q)(iv), represents a separate general licensee and requires a separate registration and fee.
 - p. Register each device annually with the Agency and pay the fee required by R12-1-1306, Category D4, if in possession of a device that meets the criteria in subsection (A)(4)(o). The general licensee shall register by verifying, correcting, and adding to the information provided in a request for registration received from the Agency. The registration information shall be submitted to the Agency within 30 days from the date on the request for registration. In addition,

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tion, a general licensee holding devices meeting the criteria of subsection (A)(4)(o) is subject to the bankruptcy notification requirements in R12-1-313(D).

- q. In registering a device, furnish the following information and any other registration information specifically requested by the Agency:
 - i. Name and mailing address of the general licensee;
 - ii. Information about each device, including the manufacturer (or initial transferor), model number, serial number, radioisotope, and activity (as indicated on the label);
 - iii. Name, title, and telephone number of the responsible individual appointed by the general licensee under subsection (A)(4)(n);
 - iv. Address or location at which each device is used and stored. For a portable device, the address of the primary place of storage;
 - v. Certification by the responsible individual that the information concerning each device has been verified through a physical inventory and review of label information; and
 - vi. Certification by the responsible individual that the individual is aware of the requirements of the general license.
 - r. Report a change in mailing address for the location of use or a change in the name of the general licensee to the Agency within 30 days of the effective date of the change. For a portable device, a report of address change is only required for a change in the device's primary place of storage.
 - s. Not use a device if the device has not been used for a period of two years. If a device with shutters is not being used, the general licensee shall ensure that the shutters are locked in the closed position. The testing required by subsection (A)(4)(b) need not be performed during a period of storage. However, if a device is put back into service or transferred to another person, and has not been tested during the required test interval, the general licensee shall ensure that the device is tested for leakage before use or transfer and that the shutter is tested before use. A device kept in standby for future use is excluded from the two-year time limit in this subsection if the general licensee performs a quarterly physical inventory regarding the standby devices.
5. A person that is generally licensed by an Agreement State with respect to a device that meets the criteria in subsection (A)(4)(o) is exempt from registration requirements if the device is used in an area subject to Agency jurisdiction for a period less than 180 days in any calendar year. The Agency does not request registration information from a general licensee if the device is exempted from licensing requirements in subsection (A)(4)(o).
 6. The general license granted under subsection (A)(1) is subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 12, and 15, and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
 7. The general license in subsection (A)(1) does not authorize the manufacture or import of devices containing byproduct material.
- B. Luminous safety devices for aircraft**
1. This subsection grants a general license that authorizes a person to own, receive, acquire, possess, and use tritium or promethium-147 contained in luminous safety devices for use in aircraft, provided that each device contains not more than 370 gigabecquerels (10 curies) of tritium or 11.1 gigabecquerels (300 millicuries) of promethium-147; and each device has been manufactured, assembled, initially transferred, or imported according to a specific license issued by the U.S. Nuclear Regulatory Commission, or each device has been manufactured or assembled according to the specifications contained in a specific license issued to the manufacturer or assembler of the device by the Agency or any Agreement State or Licensing State in accordance with licensing requirements equivalent to those in 10 CFR 32.53.
 2. A person who owns, receives, acquires, possesses, or uses a luminous safety device according to the general license granted in subsection (B)(1) is:
 - a. Exempt from the requirements of 12 A.A.C. 1, Article 4 and Article 10 except that the person shall comply with the reporting and notification provisions of R12-1-443, R12-1-444, R12-1-445, R12-1-447, and R12-1-448;
 - b. Not authorized to manufacture, assemble, repair, or import a luminous safety device that contains tritium or promethium-147;
 - c. Not authorized to export luminous safety devices containing tritium or promethium-147;
 - d. Not authorized to own, receive, acquire, possess, or use radioactive material contained in instrument dials; and
 - e. Subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
 - C. This subsection grants a general license that authorizes a person who holds a specific license to own, receive, possess, use, and transfer radioactive material if the Agency issues the license; or special nuclear material if the NRC issues the license. For americium-241, radium-226, and plutonium contained in calibration or reference sources, this subsection grants a general license in accordance with the provisions of subsections (C)(1), (2), and (3). For plutonium, ownership is included in the licensed activities.
 1. This subsection grants a general license for calibration or reference sources that have been manufactured according to the specifications contained in a specific license issued to the manufacturer or importer of the sources by the U.S. Nuclear Regulatory Commission under 10 CFR 32.57 or 10 CFR 70.39. This general license also governs calibration or reference sources that have been manufactured according to specifications contained in a specific license issued to the manufacturer by the Agency, an Agreement State, or a Licensing State, according to licensing requirements equivalent to those contained in 10 CFR 32.57 or 10 CFR 70.39, revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.
 2. A general license granted under subsection (C) or (C)(1) is subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 4, 10, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689. In addition, a person who owns, receives, acquires, possesses, uses, or transfers one or more calibration or reference sources under a general license granted under subsection (C) or (C)(1) shall:
 - a. Not possess at any one time, at any location of storage or use, more than 185 kBq (5 microcuries) of

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- americium-241, plutonium, or radium-226 in calibration or reference sources;
- b. Not receive, possess, use, or transfer a calibration or reference source unless the source, or the storage container, bears a label that includes one of the following statements, as applicable, or a substantially similar statement that contains the same information:
- i. The receipt, possession, use and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of the U.S. Nuclear Regulatory Commission or a state with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION – RADIOACTIVE MATERIAL – THIS SOURCE CONTAINS (name of the appropriate material) – DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

Name of manufacturer or importer

- ii. The receipt, possession, use and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of any Licensing State. Do not remove this label.

CAUTION – RADIOACTIVE MATERIAL – THIS SOURCE CONTAINS RADIUM-226. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

Name of manufacturer or importer

- c. Not transfer, abandon, or dispose of a calibration or reference source except by transfer to a person authorized to receive the source by a license from the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State;
- d. Store a calibration or reference source, except when the source is being used, in a closed container designed, constructed, and approved for containment of americium-241, plutonium, or radium-226 which might otherwise escape during storage; and
- e. Not use a calibration or reference source for any purpose other than the calibration of radiation detectors or the standardization of other sources.
3. The general license granted under subsection (C) or (C)(1) does not authorize the manufacture or import of calibration or reference sources that contain americium-241, plutonium, or radium-226.
4. The general license granted under subsections (C) or (C)(1) does not authorize the manufacture or export of calibration or reference sources that contain americium-241, plutonium, or radium-226.
- D.** This subsection grants a general license that authorizes a person to receive, possess, use, transfer, own, or acquire carbon-14 urea capsules, which contain one microcurie of carbon-14 urea for “in vivo” human diagnostic use:
- Except as provided in subsections (D)(2) and (3), a physician is exempt from the requirements for a specific license, provided that each carbon-14 urea capsule for “in vivo” diagnostic use contains no more than 1 microcurie.
 - A physician who desires to use the capsules for research involving human subjects shall obtain a specific license issued according to the specific licensing requirements in this Article.
3. A physician who desires to manufacture, prepare, process, produce, package, repackage, or transfer carbon-14 urea capsules for commercial distribution shall obtain a specific license from the Agency, issued according to the requirements in 10 CFR 32.21, (Revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.)
4. Nothing in this subsection relieves physicians from complying with applicable FDA and other federal and state requirements governing receipt, administration, and use of drugs.
- E.** This subsection grants a general license that authorizes any physician, clinical laboratory, or hospital to use radioactive material for certain “in vitro” clinical or laboratory testing.
- The general licensee is authorized to receive, acquire, possess, transfer, or use, for any of the following stated tests, the following radioactive materials in prepackaged units:
 - Iodine-125, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or radiation from such material, to human beings or animals.
 - Iodine-131, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - Carbon-14, in units not exceeding 370 kilobecquerel (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - Hydrogen-3 (tritium), in units not exceeding 1.85 megabecquerel (50 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - Iron-59, in units not exceeding 740 kilobecquerel (20 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - Cobalt-57 or selenium-75, in units not exceeding 370 kilobecquerels (10 microcuries) each for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - Mock iodine-125 reference or calibration sources, in units not exceeding 1.85 kBq (50 nanocurie) of iodine-129 and 185 becquerel (5 nanocurie) of americium-241 each, for use in “in vitro” clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation from such material, to human beings or animals.
 - A person shall not acquire, receive, possess, use, or transfer radioactive material according to the general license established by this subsection until the person has filed with the Agency ARRA-9, “Certificate -- “In Vitro” Testing with Radioactive Material Under General License,” provided the information listed in Exhibit E, and received a validated copy of ARRA-9, which indicates the assigned certification number. The physician, clinical lab-

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- oratory, or hospital shall furnish on ARRA-9 the following information:
- a. Name, telephone number, and address of the physician, clinical laboratory, or hospital; and
 - b. A statement that the physician, clinical laboratory, or hospital has radiation measuring instruments to carry out "in vitro" clinical or laboratory tests with radioactive material and that tests will be performed only by personnel competent to use the instruments and handle the radioactive material.
3. A person who receives, acquires, possesses, or uses radioactive material according to the general license granted under this subsection shall:
 - a. Not possess at any one time, in storage or use, a combined total of not more than 7.4 megabecquerels (200 microcuries) of iodine-125, iodine-131, iron-59, cobalt-57, or selenium-75 in excess of 7.4 megabecquerels (200 microcuries), or acquire or use in any one calendar month more than 18.5 megabecquerels (500 microcuries) of these radionuclides.
 - b. Store the radioactive material, until used, in the original shipping container or in a container that provides equivalent radiation protection.
 - c. Use the radioactive material only for the uses authorized by subsection (E).
 - d. Not transfer radioactive material to a person who is not authorized to receive it according to a license issued by the Agency, the U.S. Nuclear Regulatory Commission, or any Agreement State or Licensing State, or in any manner other than in an unopened, labeled shipping container received from the supplier.
 - e. Not dispose of a mock iodine-125 reference or calibration source described subsection (E)(1) except as authorized by R12-1-434.
 - f. Package or prepackage a unit bearing a durable, clearly visible label: identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed 0.37 megabecquerel (10 microcuries) of iodine-131, iodine-125, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3 (tritium); or 0.74 megabecquerel (20 microcuries) of iron-59; or Mock Iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 0.185 kilobecquerel (0.005 microcurie) of americium-241 each; or cobalt-57 in units not exceeding 0.37 megabecquerel (10 microcuries).
 - g. Package to display the radiation caution symbol and the words, "Caution, Radioactive Material", and "Not for Internal or External Use in Humans or Animals."
 4. The general licensee shall not receive, acquire, possess, transfer, or use radioactive material according to subsection (E)(1):
 - a. Except as prepackaged units that are labeled according to the provisions of a specific license issued by the U.S. Nuclear Regulatory Commission, or any Agreement State that authorizes the manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), iron-59, cobalt-57, selenium-75, or mock iodine-125 for distribution to persons generally licensed under subsection (E) or its equivalent federal law; and
 - b. Unless one of the following statements, or a substantially similar statement that contains the same information, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure that accompanies the package:
 - i. This radioactive material may be acquired, received, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from such material, to human beings or animals. The acquisition, receipt, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.

 Name of manufacturer
 - ii. This radioactive material shall be acquired, received, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from such material, to human beings or animals. The receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of a Licensing State.

 Name of manufacturer
 5. A physician, clinical laboratory or hospital that possesses or uses radioactive material under a general license granted by subsection (E):
 - a. Shall report to the Agency in writing, any change in the information furnished on the ARRA-9. The report shall be furnished within 30 days after the effective date of the change; and
 - b. Is exempt from the requirements of 12 A.A.C. 1, Article 4 and Article 10 with respect to radioactive material covered by the general license, except that a person using mock iodine-125 sources, described in subsection (E)(1)(g), shall comply with the provisions of R12-1-434, R12-1-443, and R12-1-444 of this Chapter.
 6. For the purposes of subsection (E), a licensed veterinary care facility is considered a "clinical laboratory."
- F.** This subsection grants a general license that authorizes a person to own, receive, acquire, possess, use, and transfer strontium-90, contained in ice detection devices, provided each device contains not more than 1.85 megabecquerels (50 microcuries) of strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission or each device has been manufactured according to the specifications contained in a specific license issued by the Agency or any Agreement State to the manufacturer of the device under licensing requirements equivalent to those in 10 CFR 32.61. A person who receives, owns, acquires, possesses, uses, or transfers strontium-90 contained in ice detection devices under a general license in accordance with subsection (F):
1. Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating, discontinue use of the device until it has been inspected, tested for leakage, and repaired by a person who holds a specific license from the U.S. Nuclear Regulatory Commission or an Agreement State to manufacture

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- or service ice detection devices; or dispose of the device according to the provisions of R12-1-434;
2. Shall assure that each label, affixed to the device at the time of receipt, which bears a statement that prohibits removal of the labels, maintained on the device; and
 3. Is exempt from the requirements of 12 A.A.C. 1, Article 4 and Article 10, except that the user of an ice detection device shall comply with the provisions of R12-1-434, R12-1-443 and R12-1-444.
 4. Shall not manufacture, assemble, disassemble, repair, or import an ice detection device that contains strontium-90.
 5. Is subject to the provisions of 12 A.A.C. 1, Articles 1, 3, 12, and 15, and A.R.S. §§ 30-654(B), 30-657(A) and (B), 30-681, and 30-685 through 30-689.
- G.** This subsection grants a general license that authorizes a person to acquire, receive, possess, use, or transfer, in accordance with the provisions of subsections (H) and (I), radium-226 contained in the following products manufactured prior to November 30, 2007.
1. Antiquities originally intended for use by the general public. For the purposes of this paragraph, antiquities mean products originally intended for use by the general public and distributed in the late 19th and early 20th centuries, such as radium emanator jars, revigators, radium water jars, radon generators, refrigerator cards, radium bath salts, and healing pads.
 2. Intact timepieces containing greater than 0.037 megabecquerel (1 microcurie), nonintact timepieces, and timepiece hands and dials no longer installed in timepieces.
 3. Luminous items installed in air, marine, or land vehicles.
 4. All other luminous products, provided that no more than 100 items are used or stored at the same location at any one time.
 5. Small radium sources containing no more than 0.037 megabecquerel (1 microcurie) of radium-226. For the purposes of this paragraph, "small radium sources" means discrete survey instrument check sources, sources contained in radiation measuring instruments, sources used in educational demonstrations (such as cloud chambers and spinthariscopes), electron tubes, lightning rods, ionization sources, static eliminators, or as designated by the NRC.
- H.** Persons who acquire, receive, possess, use, or transfer byproduct material under the general license issued in subsection (G) are exempt from the provisions 12 A.A.C. 1, Articles 1, 3, 4, 7, 10, 12, and 15 and A.R.S. §§ 30-654(B)(13), 30-657(A) and (B), 30-681, and 30-685 through 30-689, to the extent that the receipt, possession, use, or transfer of byproduct material is within the terms of the general license; provided, however, that this exemption shall not be deemed to apply to any such person specifically licensed under this chapter. Any person who acquires, receives, possesses, uses, or transfers byproduct material in accordance with the general license in subsection (G):
1. Shall notify the Agency should there be any indication of possible damage to the product so that it appears it could result in a loss of the radioactive material. A report containing a brief description of the event, and the remedial action taken, must be furnished to the Agency within 30 days.
 2. Shall not abandon products containing radium-226. The product, and any radioactive material from the product, may only be disposed of according to Article 4 or by transfer to a person authorized by a specific license to receive the radium-226 in the product or as otherwise approved by the Agency.
 3. Shall not export products containing radium-226 except in accordance with 10 CFR 110 revised January 1, 2013, incorporated by reference, and available under R12-1-101. The incorporated material contains no future editions or amendments.
 4. Shall dispose of products containing radium-226 at a disposal facility authorized to dispose of radioactive material in accordance with any federal or state solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005, by transfer to a person authorized to receive radium-226 by a specific license issued under Article 3, equivalent regulations of an Agreement State, or the NRC.
 5. Shall respond to written requests from the Agency to provide information relating to the general license within 30 calendar days of the date of the request, or other time specified in the request. If the general licensee cannot provide the requested information within the allotted time, it shall, within that same time period, request a longer period to supply the information by providing the Agency Director a written justification for the request.
- I.** The general license in subsection (G) does not authorize the manufacture, assembly, disassembly, repair, or import of products containing radium-226, except that timepieces may be disassembled and repaired.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-306 renumbered to R12-1-307, new Section R12-1-306 renumbered from R12-1-305 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-306 renumbered to R12-1-305; new Section R12-1-306 renumbered from R12-1-307 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-307. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective December 20, 1985 (Supp. 85-6). Former Section R12-1-307 renumbered to R12-1-308, new Section R12-1-307 renumbered from R12-1-306 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-307 renumbered to R12-1-306; new Section R12-1-307 renumbered from R12-1-308 and repealed by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-308. Filing Application for Specific Licenses

- A.** An applicant for a specific license shall file an Agency application. The applicant shall prepare the application in duplicate, one copy for the Agency and the other for the applicant.
- B.** The Agency may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Agency to determine whether the application should be granted or denied or whether a license should be modified or revoked.

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- C. Each application shall contain the information specified in Exhibit (E) of this Article and be signed by the applicant, licensee, or person duly authorized to act for the applicant or licensee.
- D. Unless R12-1-1302 precludes combination with a license of another category, an application for a specific license may include a request for a license that authorizes more than one activity.
- E. In the application, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Agency provided the references are clear and specific.
- F. The Agency shall make applications and documents submitted to the Agency available for public inspection, but may withhold any document or part of a document from public inspection if disclosure of its content is not required in the public interest and would adversely affect the interest of a person concerned.
- G. Except as provided in subsections (G)(1), (2), and (3), an application for a specific license to use byproduct material in the form of a sealed source or in a device that contains the sealed source must either identify the source or device by manufacturer and model number as registered with the Agency, NRC, or with an Agreement State, or, for a source or a device containing radium-226 or accelerator-produced radioactive material, with the Agency, NRC, or an Agreement State under 10 CFR 32.210 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
1. For sources or devices manufactured before October 23, 2012, that are not licensed under R12-1-306, R12-1-310, R12-1-311 or registered with the NRC or with an Agreement State, and for which the applicant is unable to provide all categories of information specified in 10 CFR 32.210(c) the application must include:
 - a. All available information identified in 10 CFR 32.210(c) concerning the source, and, if applicable, the device; and
 - b. Sufficient additional information to demonstrate that there is reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property. Such information must include a description of the source or device, a description of radiation safety features, the intended use and associated operating experience, and the results of a recent leak test.
 2. For sealed sources and devices allowed to be distributed without registration of safety information, the applicant may supply only the manufacturer, model number, and radionuclide and quantity.
 3. If it is not feasible to identify each sealed source and device individually, the applicant may propose constraints on the number and type of sealed sources and devices to be used and the conditions under which they will be used, in lieu of identifying each sealed source and device.
- H. A certificate holder or licensee who no longer manufactures or initially transfers any of the sealed source(s) or device(s) covered by a particular certificate issued with the Agency, NRC, or with an Agreement State shall request inactivation of the registration or license with the Agency, NRC, or with an Agreement State program that the device is currently registered by in accordance with 10 CFR 32.211 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-308 renumbered to R12-1-309, new Section R12-1-308 renumbered from R12-1-307 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-308 renumbered to R12-1-307; new Section R12-1-308 renumbered from R12-1-309 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-309. General Requirements for Issuance of Specific Licenses

A license application shall be approved if the Agency determines that:

1. The applicant is qualified by reason of training and experience to use the material in question for the purpose requested according to these rules, in a manner that will minimize danger to public health and safety or property;
2. The applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property;
3. The issuance of the license will not be inimical to the health and safety of the public;
4. The applicant satisfies all applicable special requirements in R12-1-310, R12-1-311, R12-1-322, R12-1-323, 12 A.A.C. 1, Articles 5, 7, and 17; and
5. The applicant demonstrates that a letter has been sent, return receipt requested, to the Mayor's office of the city, town, or, if not within an incorporated community, to the County Board of Supervisors of the county in which the applicant proposes to operate which describes:
 - a. The nature of the proposed activity involving radioactive material; and
 - b. The facility, including use and storage areas.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-309 renumbered to R12-1-310, new Section R12-1-309 renumbered from R12-1-308 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-309 renumbered to R12-1-308; new Section R12-1-309 renumbered from R12-1-310 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-310. Special Requirements for Issuance of Specific Broad Scope Licenses

- A. The Agency shall issue three classes of academic and industrial broad scope licenses, and only a single class A medical broad scope license.
1. The license may authorize the radioactive materials in multi-curie quantities, and may authorize other radioactive materials and forms in addition to those listed in subsection (A)(1)(a). A license is a broad scope class A license if it:
 - a. Contains the exact wording "Any radioactive material with Atomic Number 3 through 83" or "Any radioactive material with Atomic Number 84 through 92" in License Item 6; and
 - b. Contains the word "any" to authorize the chemical or physical form of the materials in License Item 7;

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2. A broad scope class B license is any specific license which authorizes the acquisition, possession, use, and transfer of the radioactive materials specified in Exhibit C of 12 A.A.C. 1, Article 3 in any chemical or physical form and in quantities determined as follows:
 - a. The possession limit, if only one radionuclide is possessed, is the quantity specified for that radionuclide in Exhibit C, Column I; or
 - b. The possession limit for multiple radionuclides is determined as follows: The sum of the ratios for all radionuclides possessed under the license shall not exceed unity (1). The ratio for each radionuclide is determined by dividing the quantity possessed by the applicable quantity in Exhibit C, Column I.
 3. A broad scope class C license is any specific license authorizing the possession and use of the radioactive materials specified in Exhibit C of 12 A.A.C. 1, Article 3 in any chemical or physical form and in quantities determined as follows:
 - a. The possession limit, if only one radionuclide is possessed, is the quantity specified for that radionuclide in Exhibit C, Column II; or
 - b. The possession limit for multiple radionuclides is determined as follows: The sum of the ratios for all radionuclides possessed under the license shall not exceed unity (1). The ratio for each radionuclide is determined by dividing the quantity possessed by the applicable quantity in Exhibit C, Column II.
- B. The Agency shall approve:**
1. An application for a class A broad scope license if:
 - a. The applicant satisfies the general requirements specified in R12-1-309;
 - b. The applicant has engaged in a reasonable number of activities involving the use of radioactive material. For purposes of this subsection, the requirement of "reasonable number of activities" can be satisfied by showing that the applicant has five years of experience in the use of radioactive material. The Agency may accept less than five years of experience if the applicant's qualifications are adequate for the scope of the proposed license; and
 - c. The applicant has established administrative controls and provisions relating to organization, management, procedures, recordkeeping, material control, accounting, and management review that are necessary to assure safe operations, including:
 - i. Establishment of a radiation safety committee composed of a radiation safety officer, a representative of management, and persons trained and experienced in the safe use of radioactive material;
 - ii. Appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters; and
 - iii. Establishment of appropriate administrative procedures to assure:
 - (1) Control of procurement and use of radioactive material;
 - (2) Completion of safety evaluations of proposed uses of radioactive material which take into consideration matters such as the adequacy of facilities and equipment, training and experience of the user, and operating or handling procedures; and
 - (3) Review, approval, and recording by the radiation safety committee of safety evaluations of proposed uses prepared in accordance with this subsection prior to use of the radioactive material.
 2. An application for a class B broad scope license if:
 - a. The applicant satisfies the general requirements specified in R12-1-309; and
 - b. The applicant has established administrative controls and provisions relating to organization, management, procedures, recordkeeping, material control, accounting, and management review that are necessary to assure safe operations, including:
 - i. Appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and available for advice and assistance on radiation safety matters; and
 - ii. Establishment of appropriate administrative procedures to assure:
 - (1) Control of procurement and use of radioactive material;
 - (2) Completion of safety evaluations of proposed uses of radioactive material which take into consideration matters such as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and
 - (3) Review, approval, and recording by the radiation safety officer of safety evaluations of proposed uses prepared according to subsection (B)(2)(b)(ii) prior to use of the radioactive material.
 3. An application for a class C broad scope license if:
 - a. The applicant satisfies the general requirements specified in R12-1-309; and
 - b. The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of, individuals who have received:
 - i. A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering; and
 - ii. At least 40 hours of training and experience in the safe handling of radioactive material, the characteristics of ionizing radiation, units of dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation appropriate to the type and forms of radioactive material to be used; and
 - c. The applicant has established administrative controls and provisions relating to procurement of radioactive material, procedures, recordkeeping, material control and accounting, and management review necessary to assure safe operations.
- C. Unless specifically authorized, broad-scope licensees shall not:**
1. Conduct tracer studies in the environment involving direct release of radioactive material;
 2. Acquire, receive, possess, use, own, import, or transfer devices containing 3.7 petabecquerels (100,000 curies) or more of radioactive material in sealed sources used for irradiation of materials;
 3. Conduct activities for which a specific license is issued under R12-1-311, and 12 A.A.C. 1, Articles 5, 7, or 17; or
 4. Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug, or other product designed

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- for ingestion or inhalation by, or application to, a human being.
- D.** Radioactive material possessed under the class A broad scope license shall only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety committee.
- E.** Radioactive material possessed under the class B broad scope license shall only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety officer.
- F.** Radioactive material possessed under the class C broad scope license shall only be used by, or under the direct supervision of, individuals who satisfy the requirements of R12-1-310(B)(3)(b).
- (2) Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than 1 square centimeter; 2 Sv (200 rem)
- (3) Other organs: 500 mSv (50 rem)
- c.** Each device bears a durable, legible, clearly visible label or labels that contain in a clearly identified and separate statement:
- i.** Instructions and precautions necessary to assure safe installation, operating, and servicing of the device (documents such as operating and service manuals may be identified in the label and used to provide this information);
- ii.** The requirement, or lack of requirement, for leak testing, or for testing any on-off mechanism and indicator, including the maximum time interval for the testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and
- iii.** The information called for in one of the following statements in the same or substantially similar form:

Historical Note
Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended effective November 5, 1993 (Supp. 93-4). Former Section R12-1-310 renumbered to R12-1-311, new Section R12-1-310 renumbered from R12-1-309 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-310 renumbered to R12-1-309; new Section R12-1-310 renumbered from R12-1-311 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-311. Special Requirements for a Specific License to Manufacture, Assemble, Repair, or Distribute Commodities, Products, or Devices that Contain Radioactive Material

- A.** Licensing the manufacture and distribution of devices to persons generally licensed under R12-1-306(A).
- 1.** The Agency shall grant a specific license to manufacture or distribute each device that contains radioactive material, excluding special nuclear material, to persons generally licensed under R12-1-306(A) or equivalent regulations of the U.S. NRC, an Agreement State, or the Licensing State if:
- a.** The applicant satisfies the requirements of R12-1-309;
- b.** The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:
- i.** The device can be safely operated by persons not having training in radiological protection;
- ii.** Under ordinary conditions of handling, storage, and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive a dose in excess of 10 percent of the limits specified in R12-1-408; and
- iii.** Under accident conditions (such as fire and explosion) associated with handling, storage, and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:
- (1) Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye: 150 mSv (15 rem)

The receipt, possession, use, and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent and the regulations of the U.S. Nuclear Regulatory Commission or a state with which the Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION – RADIOACTIVE MATERIAL

(name of manufacturer or distributor)

The receipt, possession, use and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent, and the regulations of a Licensing State. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION – RADIOACTIVE MATERIAL

(name of manufacturer or distributor)

- d.** The model, serial number, and name of manufacturer or distributor may be omitted from the label if the information location is specified in labeling affixed to the device;
- e.** Each device with a separable source housing that provides the primary shielding for the source also bears, on the source housing, a durable label that provides the device model number and serial number, the isotope and quantity, the words, "Caution-Radioactive Material," the radiation symbol described in R12-1-428, and the name of the manufacturer or initial distributor; and
- f.** Each device meets the criteria in 10 CFR 31.5(c)(13)(i) (revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments) and bears a permanent (e.g., embossed, etched, stamped, or engraved) label affixed to the source housing, if separable, or the device if the source housing is not separable, that

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- includes the words, "Caution-Radioactive Material," and, if practicable, the radiation symbol described in R12-1-428.
- g. The device has been registered in the Sealed Source and Device Registry.
2. In the event the applicant desires that the device undergo mandatory testing at intervals longer than six months, either for proper operation of the on-off mechanism and indicator, if any, or for leakage of radioactive material or for both, the application shall contain sufficient information to demonstrate that the longer interval is justified by performance characteristics of the device or similar devices and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the on-off mechanism and indicator. In determining the acceptable interval for the test for leakage of radioactive material, the Agency shall consider information which includes, but is not limited to:
 - a. Primary containment (source capsule),
 - b. Protection of primary containment,
 - c. Method of sealing containment,
 - d. Containment construction materials,
 - e. Form of contained radioactive material,
 - f. Maximum temperature withstood during prototype tests,
 - g. Maximum pressure withstood during prototype tests,
 - h. Maximum quantity of contained radioactive material,
 - i. Radiotoxicity of contained radioactive material, and
 - j. Operating experience with identical devices or similarly designed and constructed devices.
 3. In the event the applicant desires that the general licensee under R12-1-306(A), or under equivalent regulations of the NRC or an Agreement State or Licensing State, be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on-off mechanism and indicator, or remove the device from installation, the application shall include written instructions to be followed by the general licensee, estimated calendar quarter doses associated with the activity or activities, and bases for the estimates. The submitted information shall demonstrate that performance of the activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive a dose in excess of 10 percent of the limits specified in R12-1-408.
 4. A licensee authorized under subsection (A) to distribute a device to a generally licensed person shall provide, if a device that contains radioactive material is to be transferred for use under the general license granted in R12-1-306(A), the name of each person that is licensed under R12-1-311(A) and the information specified in this subsection for each person to whom a device will be transferred. The licensee shall provide this information before the device may be transferred. In the case of transfer through another person, the licensee shall provide the listed information to the intended user before initial transfer to the other person.
 - a. The licensee shall provide:
 - i. A copy of the general license, issued under R12-1-306(A),
 - ii. A copy of R12-1-443 and R12-1-445,
 - iii. A list of the services that can only be performed by a specific licensee,
 - iv. Information on authorized disposal options, including estimated costs of disposal, and
 - v. A list of civil penalties for improper disposal.
 5. If radioactive material is to be transferred in a device for use under an equivalent general license of the NRC or another Agreement State, each person that is licensed under R12-1-304(B) shall provide the information specified in this subsection to each person to whom a device will be transferred. The licensee shall provide this information before the device is transferred. In the case of transfer through another person, the licensee shall provide the listed information to the intended user before initial transfer to the other person. The licensee shall provide:
 - a. A copy of the Agreement State's requirements that are equivalent to R12-1-306(A), and A.R.S. §§ 30-657, R12-1-443, and R12-1-445. If a copy of NRC regulations is provided to a prospective general licensee in lieu of the Agreement State's requirements, the licensee shall explain in writing that use of the device is regulated by the Agreement State. If certain requirements do not apply to a particular device, the licensee may omit the requirement from the material provided;
 - b. A list of the services that can only be performed by a specific licensee;
 - c. Information on authorized disposal options, including estimated costs of disposal; and
 - d. The name, title, address, and telephone number of the individual at the Agreement State regulatory agency who can provide additional information.
 6. A licensee may propose to the Agency an alternate method of informing the customer.
 7. If a licensee has notified the Agency of bankruptcy under R12-1-313(E) or is terminating under R12-1-319, the licensee shall provide, upon request, to the Agency, the NRC, or another Agreement State, records of the disposition as required under A.R.S. § 30-657.
 8. A licensee authorized to transfer a device to a generally licensed person, shall comply with the following requirements:
 - a. The person licensed under subsection (A) shall report all transfers of devices to persons for use under a general license obtained under R12-1-306(A), and all receipts of devices from persons licensed under R12-1-306(A) to the Agency, NRC, or other affected Agreement State. The report shall be submitted on a quarterly basis, in a clear and legible form, and contain the following information:
 - i. Report on a quarterly basis to the responsible Agreement State or NRC all transfers of devices to persons for use under a general license in accordance with 10 CFR 32.52, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 - ii. Maintain all information concerning transfers and receipts of devices that supports the reports required by subsection (A)(4)(b).
 - iii. Maintain records required by subsection (A)(4)(b) for a period of three years following the date of the recorded event.

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- i. The identity of each general licensee by name and mailing address for the location of use. If there is no mailing address for the location of use, the person licensed under subsection (A) shall submit an alternate address for the general licensee, along with information on the actual location of use;
 - ii. The name, title, and telephone number of a person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the applicable laws;
 - iii. The date of transfer;
 - iv. The type, model number, and serial number of the device transferred; and
 - v. The quantity and type of radioactive material contained in the device.
- b. If one or more intermediaries will temporarily possess the device at the intended place of use before its possession by the intended user, the report shall include the information required of the general licensee in subsection (A)(4) for both the intended user and each intermediary, clearly identifying the intended user and each intermediary.
- c. For devices received from a general licensee, licensed under R12-1-306(A), the report shall include:
- i. The identity of the general licensee by name and address;
 - ii. The type, model number, and serial number of the device received;
 - iii. The date of receipt; and
 - iv. In the case of a device not initially transferred by the reporting licensee, the name of the manufacturer or initial transferor.
- d. If the person licensed under subsection (A) makes a change to a device possessed by a general licensee so that the label must be changed to update required information, the report shall identify the general licensee, the device, and the changes to information on the device label.
- e. The report shall cover a calendar quarter, be filed within 30 days of the end of each calendar quarter, and clearly indicate the period covered by the report.
- f. The report shall clearly identify the person licensed under subsection (A) submitting the report and include the license number of the license.
- g. If no transfers are made to or from persons generally licensed under R12-1-306(A) during a reporting period, the person licensed under subsection (A) shall submit a report indicating the lack of activity.
9. The licensee shall maintain records of all transfers for Agency inspection. Records shall be maintained for three years after termination of the license to manufacture the generally licensed devices regulated under R12-1-306(A).
- B.** The Agency shall grant a specific license to manufacture, assemble, repair, or initially transfer luminous safety devices that contain tritium or promethium-147 for use in aircraft, for distribution to persons generally licensed under R12-1-306(B), if the applicant satisfies:
- 1. The general requirements specified in R12-1-309; and
 - 2. The requirements of 10 CFR 32.53 through 32.56 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** The Agency shall grant a specific license to manufacture or initially transfer calibration or reference sources that contain americium-241, radium-226, or plutonium for distribution to persons generally licensed under R12-1-306(C) if the applicant satisfies:
- 1. The general requirements of R12-1-309; and
 - 2. The requirements of 10 CFR 32.57, 32.58, 32.59, and 70.39, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- D.** The Agency shall grant a specific license to distribute radioactive material for use by a physician under the general license in R12-1-306(D) if:
- 1. The general requirements of R12-1-309; and
 - 2. The requirements of 10 CFR 32.57, 32.58, 32.59, and 70.39, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- E.** The Agency shall grant for a specific license to manufacture or distribute radioactive material for use under the general license of R12-1-306(E) if:
- 1. The applicant satisfies the general requirements specified in R12-1-309.
 - 2. The radioactive material is to be prepared for distribution in prepackaged units of:
 - a. Iodine-125 in units not exceeding 370 kBq (10 microcuries) each;
 - b. Iodine-131 in units not exceeding 370 kBq (10 microcuries) each;
 - c. Carbon-14 in units not exceeding 370 kBq (10 microcuries) each;
 - d. Hydrogen-3 (tritium) in units not exceeding 1.85 MBq (50 microcuries) each;
 - e. Iron-59 in units not exceeding 740 kBq (20 microcuries) each;
 - f. Cobalt-57 or selenium-75 in units not exceeding 370 kilobecquerels (10 microcuries) each;
 - g. Mock iodine-125 in units not exceeding 1.85 kBq (50 nanocuries) of iodine-129 and 185 Bq (5 nanocuries) of americium-241 each.
 - 3. Each prepackaged unit bears a durable, clearly visible label:
 - a. Identifying the radioactive contents as to chemical form and radionuclide and indicating that the amount of radioactivity does not exceed 370 kilobecquerels (10 microcuries) of iodine-125, iodine-131, cobalt-57, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3 (tritium); 740 kilobecquerels (20 microcuries) of iron-59; or mock iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 185 becquerels (0.005 microcurie) of americium-241 each; and
 - b. Displaying the radiation caution symbol described in R12-1-428, the words, "CAUTION, RADIOACTIVE MATERIAL," and the phrase "Not for Internal or External Use in Humans or Animals."
 - 4. One of the following statements, or a substantially similar statement that contains the information called for in the following statements appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure that accompanies the package:
 - a. This radioactive material may be received, acquired, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external

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administration of the material, or the radiation from the radioactive material, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a state with which the Commission has entered into an agreement for the exercise of regulatory authority.

Name of Manufacturer

- b. This radioactive drug may be received, acquired, possessed, and used only by physicians, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation from the radioactive material, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of a Licensing State.

Name of Manufacturer

5. The label affixed to the unit, or the leaflet or brochure that accompanies the package, contains adequate information about the precautions to be observed in handling and storing the specified radioactive material. In the case of the mock iodine-125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in R12-1-434.
- F.** The Agency shall grant for a specific license to manufacture and distribute ice detection devices to persons generally licensed under R12-1-306(F) if the applicant satisfies:
1. The general requirements of R12-1-309; and
 2. The criteria of 10 CFR 32.61 and 32.62, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- G.** The Agency shall grant a specific license to manufacture, prepare, or transfer for commercial distribution radioactive drugs that contain radioactive material for use by a person authorized in accordance with Article 7 of this Chapter, if the applicant meets all of the requirements in 10 CFR 30.32(j) or 10 CFR 32.72, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
1. Authorization under this Section to produce Positron Emission Tomography (PET) radioactive drugs for noncommercial transfer to medical use licensees in its consortium does not relieve the licensee from complying with applicable FDA, other federal, and state requirements governing radioactive drugs.
 2. Each licensee authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall:
 - a. Satisfy the labeling requirements in R12-1-431 for each PET radioactive drug transport radiation shield and each syringe, vial, or other container used to hold a PET radioactive drug intended for noncommercial distribution to members of its consortium.
 - b. Possess and use instrumentation to measure the radioactivity of the PET radioactive drugs intended for noncommercial distribution to members of its consortium and meet the procedural, radioactivity measurement, instrument test, instrument check, and instrument adjustment requirements in R12-1-449.
 3. A licensee that is a pharmacy authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall require that any individual who prepares PET radioactive drugs be an:
 - a. Authorized nuclear pharmacist that meets the requirements in § R12-1-712, or
 - b. Individual under the supervision of an authorized nuclear pharmacist as specified in R12-1-706.
 4. A pharmacy, authorized under this Section to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium that allows an individual to work as an authorized nuclear pharmacist, shall meet the requirements of R12-1-712.
- H.** The Agency shall grant a specific license to manufacture and distribute generators or reagent kits that contain radioactive material for preparation of radiopharmaceuticals by persons licensed according to 12 A.A.C. 1, Article 7 if:
1. The applicant satisfies the general requirements of R12-1-309;
 2. The applicant submits evidence that:
 - a. The generator or reagent kit is to be manufactured, labeled and packaged according to the Federal Food, Drug, and Cosmetic Act or the Public Health Service Act, a new drug application (NDA) approved by the Food and Drug Administration (FDA), a biologic product license issued by FDA, or a "Notice of Claimed Investigational Exemption for a New Drug" (IND) that has been accepted by the FDA; or
 - b. The manufacture and distribution of the generator or reagent kit are not subject to the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act.
 3. The applicant submits information on the radionuclide; chemical and physical form, packaging including maximum activity per package, and shielding provided by the packaging of the radioactive material contained in the generator or reagent kit;
 4. The label affixed to the generator or reagent kit contains information on the radionuclide, including quantity, and date of assay; and
 5. The label affixed to the generator or reagent kit, or the leaflet or brochure that accompanies the generator or reagent kit, contains:
 - a. Adequate information, from a radiation safety stand point, on the procedures to be followed and the equipment and shielding to be used in eluting the generator or processing radioactive material with the reagent kit; and
 - b. A statement that this generator or reagent kit (as appropriate) is approved for use by persons licensed by the Agency under 12 A.A.C. 1, Article 7 or equivalent licenses of the U.S. Nuclear Regulatory Commission or an Agreement State or Licensing State. The labels, leaflets or brochures required by this subsection supplement the labeling required by FDA and they may be separate from or, with the approval of FDA, combined with the labeling required by FDA.
- I.** The Agency shall grant a specific license to manufacture and distribute sources and devices that contain radioactive material to a person licensed in accordance with Article 7 of this Chapter for use as a calibration, transmission, or reference source or for medical purposes, if the applicant meets all of the requirements in 10 CFR 32.74, revised January 1, 2015, incorporated

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by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

- J.** Requirements for license to manufacture and distribute industrial products containing depleted uranium for mass volume applications.
1. The Agency shall grant a specific license to manufacture industrial products and devices that contain depleted uranium for use under R12-1-305(C) or equivalent regulations of the U.S. Nuclear Regulatory Commission or an Agreement State if:
 - a. The applicant satisfies the general requirements in R12-1-309;
 - b. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive a radiation dose in excess of 10 percent of the limits specified in R12-1-408.
 - c. The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.
 2. In the case of an industrial product or device whose unique benefits are questionable, the Agency shall approve an application for a specific license under this subsection only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.
 3. The Agency may deny any application for a specific license under this subsection if the end use or uses of the industrial product or device cannot be reasonably foreseen.
 4. Each person licensed under subsection (J)(1) shall:
 - a. Maintain the level of quality control required by the license in the manufacture of the industrial product or device and the installation of the depleted uranium into the product or device;
 - b. Label or mark each unit to:
 - i. Identify the manufacturer of the product or device, the number of the license under which the product or device was manufactured or initially transferred, the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and
 - ii. State that the receipt, possession, use, and transfer of the product or device are subject to a general license or the equivalent and the regulations of the U.S. Nuclear Regulatory Commission or an Agreement State;
 - c. Assure that the depleted uranium, before being installed in each product or device, has been impressed with the following legend, clearly legible through any plating or other covering: "Depleted Uranium";
 - d. Furnish a copy of the general license contained in R12-1-305(C) and a copy of ARRA-23 to each person to whom depleted uranium in a product or device is transferred for use under a general license contained in R12-1-305(C); or
 - e. Furnish a copy of the general license contained in the U.S. Nuclear Regulatory Commission's or Agreement State's regulation equivalent to R12-1-305(C) and a copy of the U.S. Nuclear Regulatory Commission's or Agreement State's certificate, or alternatively, furnish a copy of the general license contained in R12-1-305(C) and a copy of ARRA-23 to each person to whom depleted uranium in a product or device is transferred for use under a general license of the U.S. Nuclear Regulatory Commission or an Agreement State, with a document explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or an Agreement State under requirements substantially the same as those in R12-1-305(C);
 - f. Report to the Agency all transfers of industrial products or devices to persons for use under the general license in R12-1-305(C). The report shall identify each general licensee by name and address, an individual by name or position who serves as the point of contact person for the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under R12-1-305(C) during the reporting period, the report shall so indicate;
 - i. Report to the U.S. Nuclear Regulatory Commission all transfers of industrial products or devices to persons for use under the U.S. Nuclear Regulatory Commission general license in 10 CFR 40.25; or
 - ii. Report to the responsible state agency all transfers of devices manufactured and distributed under subsection (J)(4)(f) for use under a general license in that state's regulations equivalent to R12-1-305(C);
 - iii. The report required in subsection (J)(4)(f)(i) or (ii) shall identify each general licensee by name and address, an individual by name or position who serves as the contact person for the general licensee, the type and model number of the device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which a product or device is transferred to the generally licensed person;
 - iv. If no transfers have been made to U.S. Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the U.S. Nuclear Regulatory Commission;
 - v. If no transfers have been made to general licensees within a particular Agreement State during the reporting period, this information shall be reported to the responsible Agreement state agency; and
 - vi. Keep records showing the name, address, and contact person for each general licensee to whom depleted uranium in industrial products or devices is transferred for use under a general license provided in R12-1-305(C) or equivalent

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regulations of the U.S. Nuclear Regulatory Commission or of an Agreement State. The records shall be maintained for a period of three years and show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the reporting requirements of this Section.

- K.** A licensee who manufactures nationally tracked sources, as defined in Article 4, shall:
1. Serialize the sources in accordance with 10 CFR 32.201, revised January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments; and
 2. Report manufacturing activities in accordance with R12-1-454.

Historical Note

Former Rule Section C.101. Former Section R12-1-311 repealed, new Section R12-1-311 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-311 renumbered to R12-1-312, new Section R12-1-311 renumbered from R12-1-310 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-311 renumbered to R12-1-310; new Section R12-1-311 renumbered from R12-1-312 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016; correction made to subsection R12-1-311(D)(2) removing (a) and (b) to reflect renumbering scheme as submitted in Supp. 09-2 (Supp. 16-1).

R12-1-312. Issuance of Specific Licenses

- A.** Upon determination that a license application meets the requirements of the Act and Agency rules, the Agency shall grant a specific license that may contain conditions or limitations if the Agency has determined that additional requirements regarding the proposed activity will protect health and safety.
- B.** The Agency may incorporate in any license at the time of issuance, or thereafter by rule or order, additional requirements and conditions with respect to the licensee's receipt, possession, use, and transfer of radioactive material in order to:
1. Minimize danger to public health and safety or property;
 2. Require reports and recordkeeping, and provide for inspections of activities under the license as may be necessary to protect health and safety; and
 3. Prevent loss or theft of material subject to this Article.
- C.** The Agency may verify information contained in an application and secure additional information necessary to make a determination on issuance of a license and whether any special conditions should be attached to the license. The Agency may inspect the facility or location where radioactive materials would be possessed or used, and discuss details of the proposed possession or use of the radioactive materials with the applicant or representatives designated by the applicant.

Historical Note

Former Rule Section C.102; Former Section R12-1-312 repealed, new Section R12-1-312 adopted effective June

30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-312 renumbered to R12-1-313, new Section R12-1-312 renumbered from R12-1-311 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-312 renumbered to R12-1-311; new Section R12-1-312 renumbered from R12-1-313 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-313. Specific Terms and Conditions

- A.** Each license issued under this Article is subject to all provisions of A.R.S. Title 30, Chapter 4 and to all rules, regulations, and orders of the Agency.
- B.** A licensee shall not transfer, assign, or in any manner dispose of a license issued or granted under this Article or a right to possess or utilize radioactive material granted by any license issued under this Article unless the Agency finds that the transfer is consistent with the Agency's statutes and rules, and gives its consent in writing. An application for transfer of license must include:
1. The identity, technical and financial qualifications of the proposed transferee; and
 2. Financial assurance for decommissioning information required by R12-1-323.
- C.** Each person licensed by the Agency under this Article shall confine the use and possession of the material licensed to the locations and purposes authorized in the license.
- D.** Each license issued pursuant to the rules in Articles 3, 5, 7, and 15 of this Chapter shall be deemed to contain the provisions set forth in the Act, whether or not these provisions are expressly set forth in the license.
- E.** The Agency may incorporate, in any license issued pursuant to the rules in this Chapter, at the time of issuance, or thereafter by appropriate rule, regulation or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use and transfer of byproduct material as it deems appropriate or necessary in order to:
1. Promote the common defense and security;
 2. Protect health or to minimize danger to life or property;
 3. Protect restricted data; or
 4. Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be necessary or appropriate to effectuate the purposes of the Act and rules thereunder.
- F.** Licensees required to submit emergency plans in accordance with R12-1-322 shall follow the emergency plan approved by the Agency. The licensee may change the approved plan without Agency approval only if the changes do not reduce the commitment of the plan. The licensee shall furnish the change to the Agency and to affected offsite response organizations within six months after the change is made. Proposed changes that reduce, or potentially reduce, the commitment of the approved emergency plan may not be implemented without prior application to and prior approval by the Agency.
- G.** Each person licensed under this Section and each general licensee that is required to register under R12-1-306(A)(4)(o) shall notify the Agency in writing if the licensee decides to permanently discontinue any or all activities involving materials authorized under the license. A specific licensee or general licensee shall notify the Agency, in writing:
1. Immediately following the filing of a petition for bankruptcy under any Chapter of Title 11 of the United States Code if the petition for bankruptcy is by or against:
 - a. The licensee;

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- b. An entity (as defined in the bankruptcy code) controlling the licensee or listing the license or licensee as property of the estate; or
 - c. An affiliate (as defined in the bankruptcy code) of the licensee.
2. Providing the following information:
- a. The bankruptcy court in which the petition for bankruptcy was filed, and
 - b. The bankruptcy case title and number, and
 - c. The date the petition was filed.

- H.** Each licensee preparing technetium-99m radiopharmaceuticals from molybdenum-99/technetium-99m generators or rubidium-82 from strontium-82/rubidium-82 generators shall test the generator eluates for molybdenum-99 breakthrough or strontium-82 and strontium-85 contamination, respectively, in accordance with R12-1-720. The licensee shall record the results of each test and retain each record for three years after the record is made.

Historical Note

Former Rule Section C.103; Former Section R12-1-313 repealed, new Section R12-1-313 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended effective June 20, 1990 (Supp. 90-2). Former Section R12-1-313 renumbered to R12-1-314, new Section R12-1-313 renumbered from R12-1-312 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-313 renumbered to R12-1-312; new Section R12-1-313 renumbered from R12-1-314 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-314. Expiration of License

Except as provided in R12-1-315(B), each specific license expires at the end of the day, in the month and year stated on the license.

Historical Note

Former Rule Section C.104; Former Section R12-1-314 repealed, new Section R12-1-314 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-314 renumbered to R12-1-315, new Section R12-1-314 renumbered from R12-1-313 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-314 renumbered to R12-1-313; new Section R12-1-314 renumbered from R12-1-315 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-315. Renewal of License

- A.** An applicant shall file an application for renewal of a specific license according to R12-1-308.
- B.** If a licensee files a renewal application not less than 30 days before the license expiration date and the existing license and associated renewal application is in proper form, the existing license does not expire until a final renewal determination is made by the Agency.

Historical Note

Former Rule Section C.105; Former Section R12-1-315 repealed, new Section R12-1-315 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-315 renumbered to R12-1-316, new Section R12-1-315 renumbered from R12-1-314 effective February 18, 1994 (Supp. 94-

1). Former Section R12-1-315 renumbered to R12-1-314; new Section R12-1-315 renumbered from R12-1-316 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-316. Amendment of Licenses at Request of Licensee

An applicant shall file an application for amendment of a specific license by complying with R12-1-308 and specifying the grounds for the amendment.

Historical Note

Former Rule Section C.106; Former Section R12-1-316 repealed, new Section R12-1-316 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-316 renumbered to R12-1-317, new Section R12-1-316 renumbered from R12-1-315 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-316 renumbered to R12-1-315; new Section R12-1-316 renumbered from R12-1-317 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-317. ARRA Action on Applications to Renew or Amend

In considering an application by a licensee to renew or amend a specific license, the Agency shall apply the criteria set forth in R12-1-309, R12-1-310, or R12-1-311 as applicable.

Historical Note

Former Rule Section C.107; Former Section R12-1-317 repealed, new Section R12-1-317 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-317 renumbered to R12-1-318, new Section R12-1-317 renumbered from R12-1-316 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-317 renumbered to R12-1-316; new Section R12-1-317 renumbered from R12-1-318 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-318. Transfer of Radioactive Material

- A.** A licensee shall not transfer radioactive material except as authorized under this Section.
- B.** Except as otherwise provided in the license and subject to the provisions of subsections (C) and (D), any licensee may transfer radioactive material:
 1. To the Agency; after receiving prior approval from the Agency;
 2. To the Department of Energy;
 3. To any person exempt from the rules in this Article to the extent permitted under the exemption;
 4. To any person authorized to receive radioactive material under terms of a general license or its equivalent, or a specific license or equivalent licensing document, issued by the Agency, the U.S. Nuclear Regulatory Commission, or any Agreement State or Licensing State, or to any person otherwise authorized to receive radioactive material by the Federal Government or any agency of the Federal Government, the Agency, any Agreement State or Licensing State; or
 5. As otherwise authorized by the Agency in writing.
- C.** Before transferring radioactive material to a specific licensee of the Agency, the U.S. Nuclear Regulatory Commission, or an Agreement State or Licensing State, or to a general licensee who is required to register with the Agency, the U.S. Nuclear Regulatory Commission, or an Agreement State or Licensing State prior to receipt of the radioactive material, the licensee

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transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred.

- D.** The transferor shall use one or more of the following methods for the verification required by subsection (C):
1. The transferor shall possess, and read, a current copy of the transferee's specific license or registration certificate;
 2. The transferor shall possess a written certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date;
 3. For emergency shipments the transferor shall accept oral certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date; provided the oral certification is confirmed in writing within 10 days;
 4. The transferor shall obtain information equivalent to that in subsection (D)(1) to (3) compiled by a reporting service from official records of the Agency, the U.S. Nuclear Regulatory Commission, or the licensing agency of an Agreement State or Licensing State regarding the identity of any licensee and the scope and expiration date of any license, registration, or certificate; or
 5. When none of the methods of verification described in subsections (D)(1) to (4) are readily available or when a transferor desires to verify that information received by one of the above methods is correct or up-to-date, the transferor shall obtain and record confirmation from the Agency, the U.S. Nuclear Regulatory Commission, or the licensing agency of an Agreement State or Licensing State that the transferee is licensed to receive the radioactive material.
- E.** A transferor shall prepare and transport radioactive material as prescribed in the provisions of 12 A.A.C. 1, Article 15.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-318 renumbered to R12-1-319, new Section R12-1-318 renumbered from R12-1-317 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-318 renumbered to R12-1-317; new Section R12-1-318 renumbered from R12-1-319 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-319. Modification, Revocation, or Termination of a License

- A.** The terms and conditions of all licenses are subject to amendment, revision, or modification, and a license may be suspended or revoked by reason of amendments to the Agency's statutes or rules and orders issued by the Agency.
- B.** The Agency may revoke, suspend, or modify any license, in whole or in part, for any material false statement in the application; any omission or misstatement of fact required by statute, rule, or order, or because of conditions revealed by the application or any report, record, or inspection or other means that would cause the Agency to refuse to grant a license; or any violation of license terms and conditions, or the Agency's statutes, rules, or orders.
- C.** Except in cases of willfulness or those in which the public health, interest, or safety requires otherwise, the Agency shall

not modify, suspend, or revoke a license unless, before the institution of proceedings, facts or conduct that may warrant action have been called to the attention of the licensee in writing and the licensee has been accorded an opportunity to demonstrate or achieve compliance.

- D.** The Agency may terminate a specific license upon a written request by the licensee that provides evidence the licensee has met the termination criteria in R12-1-451, R12-1-452, and the decommissioning requirements in R12-1-323.
- E.** Specific licenses, including expired licenses, continue in effect until terminated by written notice to the licensee, when the Agency determines that the licensee has:
1. Properly disposed of all radioactive material;
 2. Made a reasonable effort to eliminate residual radioactive contamination, if present;
 3. Performed an accurate radiation survey that demonstrates the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-323;
 4. Submitted other information that is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-323.
 5. Provided records to the Agency that detail the disposal of all radioactive material in unsealed form with a half-life greater than 120 days, and copies of the records required by 10 CFR 30.35(g), January 1, 2004, which is incorporated by reference and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-319 renumbered to R12-1-320, new Section R12-1-319 renumbered from R12-1-318 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-319 renumbered to R12-1-318; new Section R12-1-319 renumbered from R12-1-320 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-320. Reciprocal Recognition of Licenses

- A.** This subsection grants a general license to perform specific licensed activities in Arizona for a period not to exceed 180 days in any calendar year to any person who holds a specific license from an Agreement State, where the licensee maintains an office for directing the licensed activity and retaining radiation safety records, is granted a general license to conduct the same activity involving the use of radioactive material from the U.S. Nuclear Regulatory Commission, Licensing State, or any Agreement State, provided that:
1. The license does not limit the activity to specific installations or locations;
 2. Following the first notification, application, and payment of fees, the licensee shall notify the agency three days prior to entering the state and prior to each non-consecutive visit while reciprocity remains in effect.
 3. The out-of-state licensee complies with all applicable statutes, now or hereafter in effect, rules, and orders of the Agency and with all the terms and conditions of the license, except those terms and conditions inconsistent with applicable statutes, rules and orders of the Agency;

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4. The out-of-state licensee supplies any other information the Agency requests; and
5. The out-of-state licensee does not transfer or dispose of radioactive material possessed or used under the general license provided in this Section except by transfer to a person:
 - a. Specifically licensed by the Agency, or by the U.S. Nuclear Regulatory Commission to receive the radioactive material; or
 - b. Exempt under R12-1-303(A).
- B.** Notwithstanding the provisions of subsection (A)(1), this subsection grants a general license to manufacture, install, transfer, demonstrate, or service a device described in R12-1-306(A)(1) to any person who holds a specific license issued by the U.S. Nuclear Regulatory Commission, Licensing State, or an Agreement State authorizing the same activities within areas subject to the jurisdiction of the licensing body, provided that:
 1. The person files a report with the Agency within 30 days after the end of each calendar quarter in which any device is transferred to or installed in this State. Each report shall identify the general licensee to whom the device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device;
 2. The device has been manufactured, labeled, installed, and serviced according to the applicable provisions of the specific license issued to the person by the U.S. Nuclear Regulatory Commission or an Agreement State;
 3. The person entering the state ensures that any labels required to be affixed to the device under rules of the authority which licensed manufacture of the device bear the following statement: "Removal of this label is prohibited"; and
 4. The holder of the specific license furnishes a copy of the general license contained in R12-1-306(A)(1), or equivalent rules of the agency having jurisdiction over the manufacture or distribution of the device, to each general licensee to whom the licensee transfers the device or on whose premises the device is installed.
- C.** The Agency may withdraw, limit, or qualify the acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed under a license, upon determining that an action is necessary to prevent undue hazard to public health and safety, or property.
- D.** Before radioactive material can be used at a temporary job site within the state at any federal facility, a specific licensee shall determine the jurisdictional status of the job site. If the jurisdictional status is unknown, the specific licensee shall contact the controlling federal agency to determine whether the job site is under exclusive federal jurisdiction.
- E.** Before using radioactive material at a job site under exclusive federal jurisdiction, a specific licensee shall:
 1. Obtain authorization from the NRC; and
 2. Use the radioactive material in accordance with applicable NRC regulations and orders, and be able to demonstrate to the Agency that the correct license fee was paid to the NRC.
- F.** Before radioactive material can be used at a temporary job site in another state, a specific licensee shall obtain authorization from the state, if it is an Agreement State, or from the NRC for any non-Agreement State, either by filing for reciprocity or applying for a specific license.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended

effective December 20, 1985 (Supp. 85-6). Former Section R12-1-320 renumbered to R12-1-321, new Section R12-1-320 renumbered from R12-1-319 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-320 renumbered to R12-1-319; new Section R12-1-320 renumbered from R12-1-321 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-321. Repealed**Historical Note**

Former Rule Section C.201; Former Section R12-1-321 repealed, new Section R12-1-321 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-321 renumbered to R12-1-322, new Section R12-1-321 renumbered from R12-1-320 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-321 renumbered to R12-1-320; new Section R12-1-321 renumbered from R12-1-322 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-322. The Need for an Emergency Plan for Response to a Release of Radioactive Material

- A.** For purposes of this rule, "Emergency Plan" means a procedure that will be followed when an accident occurs involving licensed radioactive materials for which an offsite response may be needed from organizations, such as police, fire, or medical organizations.
- B.** Each application to possess radioactive materials in unsealed form, on foils or plated sources, or sealed in glass in excess of the quantities in Exhibit D, "Radioactive Material Quantities Requiring Consideration for an Emergency Plan" shall contain either:
 1. An evaluation showing that the maximum dose to a person off-site due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or 5 rems to the thyroid; or
 2. An emergency plan for responding to a release of radioactive material.
- C.** One or more of the following factors may be used to support an evaluation submitted under subsection (B)(1):
 1. The radioactive material is physically separated so that only a portion could be involved in an accident.
 2. All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;
 3. The release fraction in the respirable size range would be lower than the release fraction shown in Exhibit D due to the chemical or physical form of the material;
 4. The solubility of the radioactive material would reduce the dose received;
 5. Facility design or engineered safety features in the facility would cause the release fraction to be lower than shown in Exhibit D;
 6. Operating restrictions or procedures would prevent a release fraction as large as that shown in Exhibit D; or
 7. Other factors appropriate for the specific facility.

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- D.** An emergency plan for responding to a release of radioactive material submitted under subsection (B)(2) shall include the following information:
1. A brief description of the licensee's facility and areas near the site that could expose a member of the public to a dose equal to or greater than the levels expressed in subsection (B)(1).
 2. An identification of each type of radioactive materials accident for which protective actions may be needed.
 3. A classification system for classifying accidents as alerts or site area emergencies.
 4. Identification of the means of detecting each type of accident in a timely manner.
 5. A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.
 6. A brief description of the methods and equipment to assess releases of radioactive materials.
 7. A brief description of the responsibilities of licensee personnel responsible for promptly notifying offsite response organizations and the Agency; also responsibilities for developing, maintaining, and updating the plan.
 8. A commitment to and a brief description of the means to promptly notify offsite response organizations and request off-site assistance, including medical assistance for the treatment of contaminated and injured onsite workers when appropriate. A control point shall be established. The notification and coordination shall be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the Agency immediately after notification of the appropriate off-site response organizations and not later than one hour after the licensee declares an emergency.
 9. A brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to off-site response organizations and to the Agency.
 10. A brief description of the frequency, performance objectives, and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical, and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.
 11. A brief description of the means of restoring the facility to a safe condition after an accident.
 12. Provisions for conducting quarterly communications checks with off-site response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with off-site response organizations shall include the verifying and updating of all necessary telephone numbers. The licensee shall invite off-site response organizations to participate in the biennial exercises. Their participation is not required. Exercises shall use accident scenarios postulated as most probable for the specific site and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise, using individuals without direct implementation responsibility for the plan. Critiques of exercises shall evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques shall be corrected.
 13. A certification that the applicant has met its responsibilities in A.R.S. §§ 26-341 through 26-353 (emergency Planning and Community Right-to-Know Act of 1986), if applicable to the applicant's activities at the proposed place of use of the radioactive material.
- E.** The licensee shall allow 60 days for the off-site response organizations, expected to respond in case of an accident, to comment on the licensee's emergency plan before submitting it to the Agency. The licensee shall provide any comments received within the 60 days to the Agency with the emergency plan.

Historical Note

Former Section R12-1-322 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-322 renumbered from R12-1-321 effective February 18, 1994 (Supp. 94-1). Former Section R12-1-322 renumbered to R12-1-321; new Section R12-1-322 renumbered from R12-1-323 and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-323. Financial Assurance and Recordkeeping for Decommissioning

- A.** For purposes of terminating specific licensed activities:
1. "Decommissioning" means to remove a radioactive material use facility safely from service and to reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the radioactive material use license.
 2. "Byproduct material" as used in 10 CFR 30, means "radioactive material" which is defined in A.R.S. § 30-651.
 3. "Facility" means the entire site of radioactive material use, or any separate building or outdoor area where it is used.
 4. "Appendix B to Part 30" as used in 10 CFR 30, means Appendix E in 12 A.A.C. 1, Article 4.
 5. "Financial security" means having a net worth of not less than \$10,000.
- B.** When applying, each non-government applicant for a specific license that authorizes the possession and use of radioactive material, and each non-government holder of a license to possess and use radioactive material issued before the effective date of this Section, shall submit to the Agency a decommissioning funding plan or certification of financial security, as required in A.R.S. § 30-672(H). A licensee required to meet the requirements in subsection (C) is exempt from the requirements in this subsection.
- C.** When applying, each applicant for a specific license that authorizes the possession and use of radioactive material, and each holder of a license to possess and use radioactive material issued before the effective date of this Section, shall submit to the Agency a decommissioning funding plan or certification of financial assurance that meets the requirements in 10 CFR 30.35, 40.36, and 70.25, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. Each decommissioning funding plan shall be submitted to the Agency for review and approval and shall contain:
1. A detailed cost estimate for decommissioning, in an amount reflecting:
 - a. The cost of an independent contractor to perform all decommissioning activities;

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- b. The cost of meeting the R12-1-452(B) criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of R12-1-453(C), the cost estimate may be based on meeting the R12-1-453(C) criteria;
 - c. The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination; and
 - d. An adequate contingency factor.
2. Identification of and justification for using the key assumptions contained in the DCE;
 3. A description of the method of assuring funds for decommissioning from subsection (F), including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;
 4. A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and
 5. An original signed copy of the financial instrument obtained to satisfy the requirements of subsection (F) unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning).
- D.** Each licensee required to provide financial assurance for decommissioning a radioactive material facility under this Section shall maintain records of information important to the safe and effective decommissioning of the facility in an identified location until the license is terminated by the Agency. The licensee shall maintain the following records during the decommissioning process:
1. Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, and site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. The licensee shall keep records identifying the involved radionuclides and associated quantities, forms, and concentrations.
 2. As-built drawings showing modifications of structures and equipment in restricted areas where radioactive materials are used and stored, and locations of possible inaccessible contamination. If drawings are not available, the licensee shall provide appropriate records describing each location of possible contamination.
 3. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.
- E.** Decommissioning procedures:
1. Upon expiration or termination of principal activities a licensee shall notify the Agency in writing whether the licensee is discontinuing licensed activities. The licensee shall begin decommissioning its facility within 60 days after the Agency receives notice of the decision to permanently terminate principal activities, or within 12 months after receipt of notice, submit to the Agency a decommissioning plan, as prescribed in 10 CFR 30.36(g)(1), 40.42(g)(1), and 70.38(g)(1), revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The licensee shall begin decommissioning upon approval of the plan if the license has expired or no licensed activities have been conducted at the licensee's facility for a period of 24 months.
2. In addition to the notification requirements in subsection (E)(1), the licensee shall maintain in effect all decommissioning financial assurances required by this Section. The financial assurances shall be increased or may be decreased as appropriate to cover the cost estimate established for decommissioning in subsection (E)(1). The licensee may reduce the amount of the financial assurance following approval of the decommissioning plan, provided the radiological hazard is decreasing and the licensee has the approval of the Agency.
 3. The Agency shall extend the time periods established in subsection (E)(1) if a new time period is in the best interest of public health and safety.
 - a. The licensee shall submit a request for an extension no later than 30 days after the Agency receives the notice required in subsection (E)(1).
 - b. If a licensee has requested an extension, the licensee is not required to commence decommissioning activities required in subsection (E)(1), until the Agency has made a determination on the request submitted to the Agency under subsection (E)(3)(a).
 4. Except as provided in subsection (E)(5), the licensee shall complete decommissioning of a facility as soon as practicable but no later than 24 months following the initiation of decommissioning; and except as provided in subsection (E)(5), when decommissioning involves the entire facility, the licensee shall request license termination as soon as practicable but no later than 24 months following initiation of decommissioning.
 5. The Agency shall approve a request for an alternate schedule for completion of decommissioning and license termination if the Agency determines that the alternative is warranted by consideration of the conditions specified in 10 CFR 30.36(i), 40.42(i), and 70.38(i), revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 6. As a final step in decommissioning, the licensee shall meet the requirements specified in 10 CFR 30.36(j), 40.42(j), and 70.38(j), revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- F.** Each person licensed under this Article shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. Before licensed activities are transferred or assigned in accordance with R12-1-318, licensees shall transfer all records described in this paragraph to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Agency considers important to decommissioning consists of:
1. Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known infor-

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- mation on identification of involved nuclides, quantities, forms, and concentrations.
2. As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.
 3. Except for areas containing depleted uranium used only for shielding or as penetrators in unused munitions, a list contained in a single document and updated every 2 years, of the following:
 - a. All areas designated and formerly designated as restricted areas as defined under R12-1-102;
 - b. All areas outside of restricted areas that require documentation under R12-1-323(F)(1);
 - c. All areas outside of restricted areas where current and previous wastes have been buried as documented under R12-1-441; and
 - d. All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in R12-1-451, or R12-1-452; or apply for approval for disposal under R12-1-435.
 4. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.
- G.** In providing financial assurance under this section, each licensee shall use the financial assurance funds only for decommissioning activities and each licensee shall monitor the balance of funds held to account for market variations. The licensee shall replenish the funds, and report such actions to the Agency, as follows:
1. If, at the end of a calendar quarter, the fund balance is below the amount necessary to cover the cost of decommissioning, but is not below 75 percent of the cost, the licensee shall increase the balance to cover the cost, and shall do so within 30 days after the end of the calendar quarter.
 2. If, at any time, the fund balance falls below 75 percent of the amount necessary to cover the cost of decommissioning, the licensee shall increase the balance to cover the cost, and shall do so within 30 days of the occurrence.
 3. Within 30 days of taking the actions required by subsection (G)(1) or (G)(2), the licensee shall provide a written report of such actions to the Director of the Agency, and state the new balance of the fund.
- H.** The financial instrument must include the licensee's name, license number, and docket number, and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments to the Agency reflecting such changes. The financial instrument submitted must be a signed original or signed original duplicate, except where a copy of the signed original is specifically permitted. Financial assurance for decommissioning must be provided by one or more of the following methods:
1. Prepayment. Prepayment is the deposit before the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment must be made into a trust account, and the trustee and the trust must be acceptable to the Agency.
 2. A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are approved by the Agency. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are approved by the Agency. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are approved by the Agency. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are approved by the Agency. Except for an external sinking fund, a parent company guarantee or a guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section. A guarantee by the applicant or licensee may not be used in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:
 - a. The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Agency, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face-value amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Agency within 30 days after receipt of notification of cancellation.
 - b. The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Agency. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.
 - c. The surety method or insurance must remain in effect until the Agency has terminated the license.
 3. An external sinking fund in which deposits are made at least annually, coupled with a surety method, insurance, or other guarantee method, the value of which may reduce by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund must be in the form of a trust. If the other guarantee method is used, no surety or

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insurance may be combined with the external sinking fund. The surety, insurance, or other guarantee provisions must be as stated in subsection (H)(2).

4. In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning, and indicating that funds for decommissioning will be obtained when necessary.
5. When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

Historical Note

Former Section R12-1-323 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-323 adopted effective February 18, 1994 (Supp. 94-1). Former Section R12-1-323 renumbered to R12-1-322; new Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-324. Public Notification and Public Participation

Upon the receipt of a license termination plan (LTP) or decommissioning plan from a licensee, or a proposal by a licensee for decommissioning of a site in accordance with R12-1-452(C) and (D) or for other events when the Agency deems a notice to be in the public interest, the Agency shall:

1. Notify and solicit comments from:
 - a. State and local governments and any Indian Nation or other indigenous people who have legal rights that could be affected by the decommissioning, and
 - b. The Arizona Department of Environmental Quality for cases in which the licensee proposes to decommission a site in accordance with R12-1-452(D).
2. Publish the notice in the *Arizona Administrative Register* and use other methods of publication such as local newspapers, letters to local organizations, or any other method that is reasonably calculated to provide notice, and solicit comments from affected parties.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). New Section made by final rulemaking at 10 A.A.R. 4588, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-325. Timeliness in Decommissioning Facilities

- A. "Principal activities," as used in this Section, means activities authorized by the license that are essential to achieving the purposes for which the license was issued or amended. Storage, during which licensed material is not accessed for use, or disposal and other activities incidental to decontamination or decommissioning are not principal activities.
- B. Each specific license revoked by the Agency expires at midnight on the date of the Agency's final determination to revoke the license, the expiration date stated in the determination, or as otherwise provided by Agency order.
- C. Each specific license continues in effect, beyond the expiration date if necessary, with respect to possession of radioactive material, until the Agency notifies the licensee in writing that the license is terminated. During this time, the licensee shall:
 1. Limit actions involving radioactive material to those related to decommissioning;

2. Continue to control entry to restricted areas until they are suitable for release in accordance with NRC requirements; and
3. Pay the applicable annual fee for the license category listed in R12-1-1306.

- D. Within 60 days of the occurrence of any of the following, each licensee shall notify the Agency in writing of the occurrence and either begin decommissioning its site, or any separate building or outdoor area that contains residual radioactivity, so that the building or outdoor area is suitable for release in accordance with Agency requirements, or submit within 12 months of notification a decommissioning plan, if required by R12-1-323, and begin decommissioning upon approval of that plan if:
 1. The license expires in accordance with subsection (B) or R12-1-314, unless the licensee submits a renewal application in accordance with R12-1-315;
 2. The licensee decides to permanently terminate principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements;
 3. No principal activities under the license have been conducted for a period of 24 months; or
 4. No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements.

1. The license expires in accordance with subsection (B) or R12-1-314, unless the licensee submits a renewal application in accordance with R12-1-315;

2. The licensee decides to permanently terminate principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements;
3. No principal activities under the license have been conducted for a period of 24 months; or
4. No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Agency requirements.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). New Section made by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-326. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-327. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-328. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-329. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-330. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-331. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-332. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-333. Repealed**Historical Note**

Repealed effective June 30, 1977 (Supp. 77-3).

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R12-1-334. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-335. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-336. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-337. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-338. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-339. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-340. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-341. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-342. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-343. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-344. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-345. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-346. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-347. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

R12-1-348. Repealed

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3).

Exhibit A. Exempt Concentrations

Element (atomic number)	Isotope	Column I Gas Concentration ($\mu\text{Ci/ml}$) ^{1/}	Column II Liquid and Solid Concentration ($\mu\text{Ci/ml}$) ^{2/}
Antimony (51)	Sb-122		3×10^{-4}
	Sb-124		2×10^{-4}
	Sb-125		1×10^{-3}
Argon (18)	Ar-37	1×10^{-3}	
	Ar-41	4×10^{-7}	
Arsenic (33)	As-73		5×10^{-3}
	As-74		5×10^{-4}
	As-76		2×10^{-4}
	As-77		8×10^{-4}
Barium (56)	Ba-131		2×10^{-3}
	Ba-140		3×10^{-4}
Beryllium (4)	Be-7		2×10^{-2}
Bismuth (83)	Bi-206		4×10^{-4}
Bromine (35)	Br-82	4×10^{-7}	3×10^{-3}
Cadmium (48)	Cd-109		2×10^{-3}
	Cd-115m		3×10^{-4}
	Cd-115		3×10^{-4}
Calcium (20)	Ca-45		9×10^{-5}
	Ca-47		5×10^{-4}
Carbon (6)	C-14	1×10^{-6}	8×10^{-3}
Cerium (58)	Ce-141		9×10^{-4}
	Ce-143		4×10^{-4}

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	Ce-144		1X10 ⁻⁴
Cesium (55)	Cs-131		2X10 ⁻²
	Cs-134m		6X10 ⁻²
	Cs-134		9X10 ⁻⁵
Chlorine (17)	Cl-38	9X10 ⁻⁷	4X10 ⁻³
Chromium (24)	Cr-51		2X10 ⁻²
Cobalt (27)	Co-57		5X10 ⁻³
	Co-58		1X10 ⁻³
	Co-60		5X10 ⁻⁴
Copper (29)	Cu-64		3X10 ⁻³
Dysprosium (66)	Dy-165		4X10 ⁻³
	Dy-166		4X10 ⁻⁴
Erbium (68)	Er-169		9X10 ⁻⁴
	Er-171		1X10 ^v
Europium (63)	Eu-152 (T _r =9.2 h)		6X10 ⁻⁴
	Eu-155		2X10 ⁻³
Fluorine (9)	F-18	2X10 ⁻⁶	8X10 ⁻³
Gadolinium (64)	Gd-153		2X10 ⁻³
	Gd-159		8X10 ⁻⁴
Gallium (31)	Ga-72		4X10 ⁻⁴
Germanium (32)	Ge-71		2X10 ⁻²
Gold (79)	Au-196		2X10 ⁻³
	Au-198		5X10 ⁻⁴
	Au-199		2X10 ⁻³
Hafnium (72)	Hf-181		7X10 ⁻⁴
Hydrogen (1)	H-3	5X10 ⁻⁶	3X10 ⁻²
Indium (49)	In-113m		1X10 ⁻²
	In-114m		2X10 ⁻⁴
Iodine	I-126	3X10 ⁻⁹	2X10 ⁻⁵
	I-131	3X10 ⁻⁹	2X10 ⁻⁵
	I-132	8X10 ⁻⁸	6X10 ⁻⁴
	I-133	1X10 ⁻⁸	7X10 ⁻⁵
	I-134	2X10 ⁻⁷	1X10 ⁻³
Iridium (77)	Ir-190		2X10 ⁻³
	Ir-192		4X10 ⁻⁴
	Ir-194		3X10 ⁻⁴
Iron (26)	Fe-55		8X10 ⁻³
	Fe-59		6X10 ⁻⁴
Krypton (36)	Kr-85m	1X10 ⁻⁶	
	Kr-85	3X10 ⁻⁶	
Lanthanum (57)	La-140		2X10 ⁻⁴
Lead (82)	Pb-203		4X10 ⁻³
Lutetium (71)	Lu-177		1X10 ⁻³
Manganese (25)	Mn-52		3X10 ⁻⁴
	Mn-54		1X10 ⁻³
	Mn-56		1X10 ⁻³
Mercury (80)	Hg-197m		2X10 ⁻³
	Hg-197		3X10 ⁻³
	Hg-203		2X10 ⁻⁴
Molybdenum (42)	Mo-99		2X10 ⁻³
Neodymium (60)	Nd-147		6X10 ⁻⁴
	Nd-149		3X10 ⁻³

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Nickel (28)	Ni-65		1×10^{-3}
Niobium (Columbium) (41)	Nb-95		1×10^{-3}
	Nb-97		9×10^{-3}
Osmium (76)	Os-185		7×10^{-4}
	Os-191m		3×10^{-2}
	Os-191		2×10^{-3}
	Os-193		6×10^{-4}
Palladium (46)	Pd-103		3×10^{-3}
	Pd-109		9×10^{-4}
Phosphorus (15)	P-32		2×10^{-4}
Platinum (78)	Pt-191		1×10^{-3}
	Pt-193m		1×10^{-2}
	Pt-197m		1×10^{-2}
	Pt-197		1×10^{-3}
Potassium (19)	K-42		3×10^{-3}
Praseodymium (59)	Pr-142		3×10^{-4}
	Pr-143		5×10^{-4}
Promethium (61)	Pm-147		2×10^{-3}
	Pm-149		4×10^{-4}
Rhenium (75)	Re-183		6×10^{-3}
	Re-186		9×10^{-4}
	Re-188		6×10^{-4}
Rhodium (45)	Rh-103m		1×10^{-1}
	Rh-105		1×10^{-3}
Rubidium (37)	Rb-86		7×10^{-4}
Ruthenium (44)	Ru-97		4×10^{-3}
	Ru-103		8×10^{-4}
	Ru-105		1×10^{-3}
	Ru-106		1×10^{-4}
	Ru-106		1×10^{-4}
Samarium (62)	Sm-153		8×10^{-4}
Scandium (21)	Sc-46		4×10^{-4}
	Sc-47		9×10^{-4}
	Sc-48		3×10^{-4}
Selenium (34)	Se-75		3×10^{-3}
Silicon (14)	Si-31		9×10^{-3}
Silver (47)	Ag-105		1×10^{-3}
	Ag-110m		3×10^{-4}
	Ag-111		4×10^{-4}
Sodium (11)	Na-24		2×10^{-3}
Strontium (38)	Sr-85		1×10^{-3}
	Sr-89		1×10^{-4}
	Sr-91		7×10^{-4}
	Sr-92		7×10^{-4}
	Sr-92		7×10^{-4}
Sulfur (16)	S-35	9×10^{-8}	6×10^{-4}
Tantalum (73)	Ta-182		4×10^{-4}
Technetium (43)	Tc-96m		1×10^{-1}
	Tc-96		1×10^{-3}
Tellurium (52)	Te-125m		2×10^{-3}
	Te-127m		6×10^{-4}
	Te-127		3×10^{-3}
	Te-129m		3×10^{-4}
	Te-131m		6×10^{-4}
Te-132		3×10^{-4}	

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Terbium (65)	Tb-160		4X10 ⁻⁴
Thallium (81)	Tl-200		4X10 ⁻³
	Tl-201		3X10 ⁻³
	Tl-202		1X10 ⁻³
	Tl-204		1X10 ⁻³
Thulium (69)	Tm-170		5X10 ⁻⁴
	Tm-171		5X10 ⁻³
Tin (50)	Sn-113		9X10 ⁻⁴
	Sn-125		2X10 ⁻⁴
Tungsten (Wolfram) (74)	W-181		4X10 ⁻³
	W-187		7X10 ⁻⁴
Vanadium (23)	V-48		3X10 ⁻⁴
Xenon (54)	Xe-131m	4X10 ⁻⁶	
	Xe-133	3X10 ⁻⁶	
	Xe-135	1X10 ⁻⁶	
Ytterbium (70)	Yb-175		1X10 ⁻³
Yttrium (39)	Y-90		2X10 ⁻⁴
	Y-91m		3X10 ⁻²
	Y-91		3X10 ⁻⁴
	Y-92		6X10 ⁻⁴
	Y-93		3X10 ⁻⁴
Zinc (30)	Zn-65		1X10 ⁻³
	Zn-69m		7X10 ⁻⁴
	Zn-69		2X10 ⁻²
Zirconium (40)	Zr-95		6X10 ⁻⁴
	Zr-97		2X10 ⁻⁴

(See notes at end of appendix)

Beta and/or gamma emitting
radioactive material not
listed above with half-life
less than three years

1X10⁻¹⁰1X10⁻⁶

NOTE 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Schedule A the activity stated is that of the parent isotope and takes into account the daughters.

^{1/} Values are given in Column I only for those materials normally used as gases

^{2/} μ Ci/gm are for solids

NOTE 2: For purposes of Section 303 where there is involved a combination of isotopes, the limit for the combination should be derived as follows: Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule A for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

EXAMPLE:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

Historical Note

Appendix A repealed, Schedule A adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

Exhibit B. Exempt Quantities

Material	Microcuries	Barium-133 (Ba-133)	10
Antimony-122 (Sb-122)	100	Barium-140 (Ba-140)	10
Antimony-124 (Sb-124)	10	Bismuth-210 (Bi-210)	1
Antimony-125 (Sb-125)	10	Bromine-82 (Br-82)	10
Arsenic-73 (As-73)	100	Cadmium-109 (Cd-109)	10
Arsenic-74 (As-74)	10	Cadmium-115m (Cd-115m)	10
Arsenic-76 (As-76)	10	Cadmium-115 (Cd-115)	100
Arsenic-77 (As-77)	100	Calcium-45 (Ca-45)	10
Barium-131 (Ba-131)	10	Calcium-47 (Ca-47)	10

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Carbon-14 (C-14)	100	Krypton-87 (Kr-87)	10
Cerium-141 (Ce-141)	100	Lanthanum-140 (La-140)	10
Cerium-143 (Ce-143)	100	Lutetium-177 (Lu-177)	100
Cerium-144 (Ce-144)	1	Manganese-52 (Mn-52)	10
Cesium-129 (Cs-129)	100	Manganese-54 (Mn-54)	10
Cesium-131 (Cs-131)	1,000	Manganese-56 (Mn-56)	10
Cesium-134m (Cs-134m)	100	Mercury-197m (Hg-197m)	100
Cesium-134 (Cs-134)	1	Mercury-197 (Hg-197)	100
Cesium-135 (Cs-135)	10	Mercury-203 (Hg-203)	10
Cesium-136 (Cs-136)	10	Molybdenum-99 (Mo-99)	100
Cesium-137 (Cs-137)	10	Neodymium-147 (Nd-147)	100
Chlorine-36 (Cl-36)	10	Neodymium-149 (Nd-149)	100
Chlorine-38 (Cl-38)	10	Nickel-59 (Ni-59)	100
Chromium-51 (Cr-51)	1,000	Nickel-63 (Ni-63)	10
Cobalt-57 (Co-57)	100	Nickel-65 (Ni-65)	100
Cobalt-58m (Co-58m)	10	Niobium-93m (Nb-93m)	10
Cobalt-58 (Co-58)	10	Niobium-95 (Nb-95)	10
Cobalt-60 (Co-60)	1	Niobium-97 (Nb-97)	10
Copper-64 (Cu-64)	100	Osmium-185 (Os-185)	10
Dysprosium-165 (Dy-165)	10	Osmium-191m (Os-191m)	100
Dysprosium-166 (Dy-166)	100	Osmium-191 (Os-191)	100
Erbium-169 (Er-169)	100	Osmium-193 (Os-193)	100
Erbium-171 (Er-171)	100	Palladium-103 (Pd-103)	100
Europium-152 (Eu-152) (9.2 h)	100	Palladium-109 (Pd-109)	100
Europium-152 (Eu-152) (13 yr)	1	Phosphorus-32 (P-32)	10
Europium-154 (Eu-154)	1	Platinum-191 (Pt-191)	100
Europium-155 (Eu-155)	10	Platinum-193m (Pt-193m)	100
Fluorine-18 (F-18)	1,000	Platinum-193 (Pt-193)	100
Gadolinium-153 (Gd-153)	10	Platinum-197m (Pt-197m)	100
Gadolinium-159 (Gd-159)	100	Platinum-197 (Pt-197)	100
Gallium-67 (Ga-67)	100	Polonium-210 (Po-210)	0.1
Gallium-72 (Ga-72)	10	Potassium-42 (K-42)	10
Germanium-68 (Ge-68)	10	Potassium-43 (K-43)	10
Germanium-71 (Ge-71)	100	Praseodymium-142 (Pr-142)	100
Gold-195 (Au-195)	10	Praseodymium-143 (Pr-143)	100
Gold-198 (Au-198)	100	Promethium-147 (Pm-147)	10
Gold-199 (Au-199)	100	Promethium-149 (Pm-149)	10
Hafnium-181 (Hf-181)	10	Rhenium-186 (Re-186)	100
Holmium-166 (Ho-166)	100	Rhenium-188 (Re-188)	100
Hydrogen-3 (H-3)	1,000	Rhodium-103m (Rh-103m)	100
Indium-111 (In-111)	100	Rhodium-105 (Rh-105)	100
Indium-113m (In-113m)	100	Rubidium-81 (Rb-81)	10
Indium-114m (In-114m)	10	Rubidium-86 (Rb-86)	10
Indium-115m (In-115m)	100	Rubidium-87 (Rb-87)	10
Indium-115 (In-115)	10	Ruthenium-97 (Ru-97)	100
Iodine-123 (I-123)	100	Ruthenium-103 (Ru-103)	10
Iodine-125 (I-125)	1	Ruthenium-105 (Ru-105)	10
Iodine-126 (I-126)	1	Ruthenium-106 (Ru-106)	1
Iodine-129 (I-129)	0.1	Samarium-151 (Sm-151)	10
Iodine-131 (I-131)	1	Samarium-153 (Sm-153)	100
Iodine-132 (I-132)	10	Scandium-46 (Sc-46)	10
Iodine-133 (I-133)	1	Scandium-47 (Sc-47)	100
Iodine-134 (I-134)	10	Scandium-48 (Sc-48)	10
Iodine-135 (I-135)	10	Selenium-75 (Se-75)	10
Iridium-192 (Ir-192)	10	Silicon-31 (Si-31)	100
Iridium-194 (Ir-194)	100	Silver-105 (Ag-105)	10
Iron-52 (Fe-52)	10	Silver-110m (Ag-110m)	1
Iron-55 (Fe-55)	100	Silver-111 (Ag-111)	100
Iron-59 (Fe-59)	10	Sodium-22 (Na-22)	10
Krypton-85 (Kr-85)	100	Sodium-24 (Na-24)	10

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Strontium-85 (Sr-85)	10	Tin-113 (Sn-113)	10
Strontium-89 (Sr-89)	1	Tin-125 (Sn-125)	10
Strontium-90 (Sr-90)	0.1	Tungsten-181 (W-181)	10
Strontium-91 (Sr-91)	10	Tungsten-185 (W-185)	10
Strontium-92 (Sr-92)	10	Tungsten-187 (W-187)	100
Sulfur-35 (S-35)	100	Vanadium-43 (V-43)	10
Tantalum-182 (Ta-182)	10	Xenon-131m (Xe-131m)	1,000
Technetium-96 (Tc-96)	10	Xenon-133 (Xe-133)	100
Technetium-97m (Tc-97m)	100	Xenon-135 (Xe-135)	100
Technetium-97 (Tc-97)	100	Ytterbium-175 (Yb-175)	100
Technetium-99m (Tc-99m)	100	Yttrium-87 (Y-87)	10
Technetium-99 (Tc-99)	10	Yttrium-88 (Y-88)	10
Tellurium-125m (Te-125m)	10	Yttrium-90 (Y-90)	10
Tellurium-127m (Te-127m)	10	Yttrium-91 (Y-91)	10
Tellurium-127 (Te-127)	100	Yttrium-92 (Y-92)	100
Tellurium-129m (Te-129m)	10	Yttrium-93 (Y-93)	100
Tellurium-129 (Te-129)	100	Zinc-65 (Zn-65)	10
Tellurium-131m (Te-131m)	10	Zinc-69m (Zn-69m)	100
Tellurium-132 (Te-132)	10	Zinc-69 (Zn-69)	1,000
Terbium-160 (Tb-160)	10	Zirconium-93 (Zr-93)	10
Thallium-200 (Tl-200)	100	Zirconium-95 (Zr-95)	10
Thallium-201 (Tl-201)	100	Zirconium-97 (Zr-97)	10
Thallium-202 (Tl-202)	100	Any radionuclide material not	
Thallium-204 (Tl-204)	10	listed above other than alpha-	
Thulium-170 (Tm-170)	10	emitting radioactive material	0.1
Thulium-171 (Tm-171)	10		

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Exhibit B amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

Exhibit C. Limits for Class B and C Broad Scope Licenses (R12-1-310)

<u>Radioactive Material</u>	<u>Col. I</u> <u>curies</u>	<u>Col. II</u> <u>curies</u>		
Antimony-122	1	0.01	Chlorine-38	100 1.
Antimony-124	1	0.01	Chromium-51	100 1.
Antimony-125	1	0.01	Cobalt-57	10 0.1
Arsenic-73	10	0.1	Cobalt-58m	100 1.
Arsenic-74	1	0.01	Cobalt-58	1 0.01
Arsenic-76	1	0.01	Cobalt-60	0.1 0.001
Arsenic-77	10	0.1	Copper-64	10 0.1
Barium-131	10	0.1	Dysprosium-165	100 1.
Barium-140	1	0.01	Dysprosium-166	10 0.1
Beryllium-7	10	0.1	Erbium-169	10 0.1
Bismuth-210	0.1	0.001	Erbium-171	10 0.1
Bromine-82	10	0.1	Europium-152 (9.2 h)	10 0.1
Cadmium-109	1	0.01	Europium-152 (13 yr)	0.1 0.001
Cadmium-115m	1	0.01	Europium-154	0.1 0.001
Cadmium-115	10	0.1	Europium-155	1 0.01
Calcium-45	1	0.01	Fluorine-18	100 1.
Calcium-47	10	0.1	Gadolinium-153	1 0.1
Carbon-14	100	1.	Gadolinium-159	10 0.1
Cerium-141	10	0.1	Gallium-72	10 0.1
Cerium-143	10	0.1	Germanium-71	100 1.
Cerium-144	0.1	0.001	Gold-198	10 0.1
Cesium-131	100	1.	Gold-199	10 0.1
Cesium-134m	100	1.	Hafnium-181	1 0.1
Cesium-134	0.1	0.001	Holmium-166	10 0.1
Cesium-135	1	0.01	Hydrogen-3	100 1.
Cesium-136	10	0.1	Indium-113m	100 1.
Cesium-137	0.1	0.001	Indium-114m	1 0.1
Chlorine-36	1	0.01	Indium-115m	100 1.
			Indium-115	1 0.1
			Iodine-125	0.1 0.001
			Iodine-126	0.1 0.001

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Iodine-129	0.1	0.001	Scandium-47	10	0.1
Iodine-131	0.1	0.001	Scandium-48	1	0.01
Iodine-132	10	0.1	Selenium-75	1	0.01
Iodine-133	1	0.1	Silicon-31	10	0.1
Iodine-134	10	0.1	Silver-105	1	0.01
Iodine-135	1	0.1	Silver-110m	0.1	0.001
Iridium-192	1	0.1	Silver-111	10	0.1
Iridium-194	10	0.1	Sodium-22	0.1	0.001
Iron-55	10	0.1	Sodium-24	1	0.01
Iron-59	1	0.1	Strontium-85	1,000	10
Krypton-85	100	1.	Strontium-85	1	0.01
Krypton-87	10	0.1	Strontium-89	1	0.01
Lanthanum-140	1	0.1	Strontium-90	0.01	0.0001
Lutetium-177	10	0.1	Strontium-91	10	0.1
Manganese-52	1	0.1	Strontium-92	10	0.1
Manganese-54	1	0.1	Sulfur-35	100	0.1
Manganese-56	10	0.1	Tantalum-182	1	0.01
Mercury-197m	10	0.1	Technetium-96	10	0.1
Mercury-197	10	0.1	Technetium-97m	10	0.1
Mercury-203	1	0.1	Technetium-97	10	0.1
Molybdenum-99	10	0.1	Technetium-99m	100	1.
Neodymium-147	10	0.1	Technetium-99	1	0.01
Neodymium-149	10	0.1	Tellurium-125m	1	0.01
Nickel-59	10	0.1	Tellurium-127m	1	0.01
Nickel-63	1	0.1	Tellurium-127	10	0.1
Nickel-65	10	0.1	Tellurium-129m	1	0.01
Niobium-93m	1	0.1	Tellurium-129	100	1.
Niobium-95	1	0.1	Tellurium-131m	10	0.1
Niobium-97	100	1.	Tellurium-132	1	0.01
Osmium-185	1	0.1	Terbium-160	1	0.01
Osmium-191m	100	1.	Thallium-200	10	0.1
Osmium-191	10	0.1	Thallium-201	10	0.1
Osmium-193	10	0.1	Thallium-202	10	0.1
Palladium-103	10	0.1	Thallium-204	1	0.01
Palladium-109	10	0.1	Thulium-170	1	0.01
Phosphorus-32	1	0.01	Thulium-171	1	0.01
Platinum-191	10	0.1	Tin-113	1	0.01
Platinum-193m	100	1.	Tin-125	1	0.01
Platinum-193	10	0.1	Tungsten-181	1	0.01
Platinum-197m	100	1.	Tungsten-185	1	0.01
Platinum-197	10	0.1	Tungsten-197	10	0.1
Polonium-210	0.01	0.0001	Vanadium-43	1	0.01
Potassium-42	1	0.01	Xenon-131m	1,000	10
Praseodymium-142	10	0.1	Xenon-133	100	1.
Praseodymium-143	10	0.1	Xenon-135	100	1.
Promethium-147	1	0.01	Ytterbium-175	10	0.1
Promethium-149	10	0.1	Yttrium-90	1	0.01
Radium-226	0.01	0.0001	Yttrium-91	1	0.01
Rhenium-186	10	0.1	Yttrium-92	10	0.1
Rhenium-188	10	0.1	Yttrium-93	1	0.01
Rhodium-103m	1,000	10	Zinc-65	1	0.01
Rhodium-105	10	0.1	Zinc-69m	10	0.1
Rubidium-86	1	0.01	Zinc-69	100	1.
Rubidium-87	1	0.01	Zirconium-93	1	0.01
Ruthenium-97	100	1.	Zirconium-95	1	0.01
Ruthenium-103	1	0.01	Zirconium-97	1	0.01
Ruthenium-105	10	0.1	Any radioactive material		
Ruthenium-106	0.1	0.001	other than source material,		
Samarium-151	1	0.01	special nuclear material,		
Samarium-153	10	0.1	or alpha emitting radioactive		
Scandium-46	1	0.01	material not listed above.	0.1	0.001

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Schedule C repealed; new Exhibit C renumbered from Exhibit D and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

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Exhibit D. Radioactive Material Quantities Requiring Consideration for an Emergency Plan (R12-1-322)

<u>Radioactive Material</u>	<u>Release Fraction</u>	<u>Quantity (Ci)</u>
Actinium-228	0.001	4,000
Americium-241	.001	2
Americium-242	.001	2
Americium-243	.001	2
Antimony-124	.01	4,000
Antimony-126	.01	6,000
Barium-133	.01	10,000
Barium-140	.01	30,000
Bismuth-207	.01	5,000
Bismuth-210	.01	600
Cadmium-109	.01	1,000
Cadmium-113	.01	80
Calcium-45	.01	20,000
Californium-252	.001	9 (20 mg)
Carbon-14 (Non CO)	.01	50,000
Cerium-141	.01	10,000
Cerium-144	.01	300
Cesium-134	.01	2,000
Cesium-137	.01	3,000
Chlorine-36	.5	100
Chromium-51	.01	300,000
Cobalt-60	.001	5,000
Copper-64	.01	200,000
Curium-242	.001	60
Curium-243	.001	3
Curium-244	.001	4
Curium-245	.001	2
Europium-152	.01	500
Europium-154	.01	400
Europium-155	.01	3,000
Gadolinium-153	.01	5,000
Germanium-68	.01	2,000
Gold-198	.01	30,000
Hafnium-172	.01	400
Hafnium-181	.01	7,000
Holmium-166m	.01	100
Hydrogen-3	.5	20,000
Indium-114m	.01	1,000
Iodine-125	.5	10
Iodine-131	.5	10
Iridium-192	.001	40,000
Iron-55	.01	40,000
Iron-59	.01	7,000
Krypton-85	1.0	6,000,000
Lead-210	.01	8
Manganese-56	.01	60,000
Mercury-203	.01	10,000
Molybdenum-99	.01	30,000
Neptunium-237	.001	2
Nickel-63	.01	20,000
Niobium-94	.01	300
Phosphorus-32	.5	100
Phosphorus-33	.5	1,000
Polonium-210	.01	10
Potassium-42	.01	9,000
Promethium-145	.01	4,000
Promethium-147	.01	4,000
Radium-226	.001	100
Ruthenium-106	.01	200
Samarium-151	.01	4,000
Scandium-46	.01	3,000
Selenium-75	.01	10,000

Silver-110m	.01	1,000
Sodium-22	.01	9,000
Sodium-24	.01	10,000
Strontium-89	.01	3,000
Strontium-90	.01	90
Sulfur-35	.5	900
Technetium-99	.01	10,000
Technetium-99m	.01	400,000
Tellurium-127m	.01	5,000
Tellurium-129m	.01	5,000
Terbium-160	.01	4,000
Thulium-170	.01	4,000
Tin-113	.01	10,000
Tin-123	.01	3,000
Tin-126	.01	1,000
Titanium-44	.01	100
Vanadium-48	.01	7,000
Xenon-133	1.0	900,000
Yttrium-91	.01	2,000
Zinc-65	.01	5,000
Zirconium-93	.01	400
Zirconium-95	.01	5,000
Any other beta-gamma emitter	.01	10,000
Mixed fission products	.01	1,000
Mixed corrosion products	.01	10,000
Contaminated equipment		
beta-gamma	.001	10,000
Irradiated material, any form		
other than solid non-combustible	.01	1,000
Irradiated material, solid noncombustible	.001	10,000
Mixed radioactive waste, beta-gamma	.01	1,000
Packaged mixed waste, beta gamma	.001	10,000
Any other alpha emitter	.001	2
Contaminated equipment, alpha	.0001	20
Packaged waste, alpha	.0001	20

Combinations of radioactive materials listed above:

For combinations of radioactive materials, consideration of the need for an emergency plan is required if the sum of the ratios of the quantity of each radioactive material authorized to the quantity listed for that material in Exhibit D exceeds 1.

NOTE: Waste packaged in Type B containers does not require an emergency plan.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Former Schedule D renumbered to Exhibit C; new Exhibit D renumbered from Schedule E and amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Exhibit D amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

Exhibit E. Application Information

1. Radioactive Material (RAM) Specific License Application Information

An applicant shall provide the following information in a specific license application before a license is issued to the applicant. The Agency shall provide an application form to an applicant with a guide, when possible, to ensure that correct information is provided in the application:

- Name and mailing address of applicant
- Use location

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Contact person	Telephone number
Users of RAM	Training of users
Radiation Safety Officer identity (RSO)	Duties of RSO
Description of RAM and uses	Description of radiation detection/measurement instruments and their calibration
Personnel monitoring	Bioassay program
Facility description	Survey program
Leak test program	Records management program
Instruction to personnel	Waste disposal program
Emergency procedures	Procedures for ordering, receiving, and opening packages
Description of animal use	Licensing fee provided with application
Copy of letter-of-intent to local governing body	Description of ALARA and quality management programs
Description of transportation procedures	Certifying signature
Legal structure of licensee's operation	
Other licensing requirements listed in: R12-1-310, R12-1-311, R12-1-312, R12-1-511, R12-1-703, and R12-1-1721	

2. Radioactive Material (RAM) General License Application Information

An applicant shall provide the following information on a registration certificate. The certificate will be validated and returned to the applicant if the information provided is complete.

Name and address	Telephone number
Where will the radioactive material be used	Address of use location
Description of radioactive material use	Date
Authorizing signature and printed name	Position of person signing the form

Historical Note

Adopted effective February 18, 1994 (Supp. 94-1). Former Schedule E renumbered to Exhibit D; new Exhibit adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

ARTICLE 4. STANDARDS FOR PROTECTION AGAINST IONIZING RADIATION

R12-1-401. Purpose

- A. Article 4 establishes standards for protection against ionizing radiation resulting from activities conducted according to licenses or registrations issued by the Agency. These rules are issued according to A.R.S. Title 30, Chapter 4, as amended.
- B. The requirements of Article 4 are designed to control the receipt, possession, use, transfer, and disposal of sources of radiation by any licensee or registrant so the total dose equivalent to an individual, including radiation exposure resulting from all sources of radiation other than radiation prescribed by a physician in the practice of medicine, radiation received while voluntarily participating in a medical research program, and background radiation, does not exceed the standards for protection against radiation prescribed in this Article. How-

ever, this Article does not limit actions that may be necessary to protect health and safety.

Historical Note

Former Rule Section D.1; Former Section R12-1-401 repealed, new Section R12-1-401 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-402. Scope

Except as specifically provided in other Articles of these rules, Article 4 applies to persons licensed or registered by the Agency to receive, possess, use, transfer, or dispose of sources of ionizing radiation.

Historical Note

Former Rule Section D.2; Former Section R12-1-402 repealed, new Section R12-1-402 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended subsection (A) effective June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-403. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

“Air-purifying respirator” means respiratory protective equipment with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

“ALI” means annual limit on intake, the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the Reference Man that would result in a committed effective dose equivalent of 0.05 Sv (5 rem) or a committed dose equivalent of 0.5 Sv (50 rem) to any individual organ or tissue. ALI values for intake by ingestion and by inhalation of selected radionuclides are given in Appendix B, Table I, Columns 1 and 2.

“Assigned protection factor” or “APF” means the expected workplace level of respirator protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

“Atmosphere-supplying respirator” means respiratory protective equipment that supplies the equipment user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

“Class” means a classification scheme for inhaled material according to the material’s rate of clearance from the lung. Materials are classified as D, W, or Y, which applies to a range of clearance half-times: for Class D, days, of less than 10 days, for Class W, weeks, from 10 to 100 days, and for Class Y, years, of greater than 100 days (see Introduction, Appendix B). For purposes of these rules, “lung class” and “inhalation class” are equivalent terms.

“Constraint” or “dose constraint” means a value above which specified licensee or registrant actions are required.

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“Critical group” means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

“DAC” means derived air concentration, the concentration of a given radionuclide in air which, if breathed by Reference Man for a working year of 2,000 hours under conditions of light work, results in an intake of one ALI. For purposes of these rules, the condition of light work is an inhalation rate of 1.2 cubic meters of air per hour for 2,000 hours in a year. DAC values are given in Appendix B, Table I, Column 3.

“DAC-hour” means derived air concentration-hour, the product of the concentration of radioactive material in air, expressed as a fraction or multiple of the derived air concentration for each radionuclide, and the time of exposure to that radionuclide, in hours. A licensee or registrant may take 2,000 DAC-hours to represent one ALI, equivalent to a committed effective dose equivalent of 0.05 Sv (5 rem).

“Declared pregnant woman” means a woman who has voluntarily informed the licensee or registrant in writing of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

“Decommission” means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license or release of the property under restricted conditions and the termination of the license.

“Demand respirator” means an atmosphere-supplying respiratory protective equipment that admits breathing air to the face piece only when a negative pressure is created inside the face piece by inhalation.

“Deterministic effect” (See “Nonstochastic effect”)

“Disposable respirator” means respiratory protective equipment for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent depletion, physical damage, or end-of-service-life renders it unsuitable for use. Examples of this type of device include a disposable half-mask respirator or a disposable, escape-only, self-contained breathing apparatus (SCBA).

“Distinguishable from background” means that the detectable concentration of a radionuclide is statistically greater than the background concentration of that radionuclide in the vicinity of a site or, in the case of structures, in similar materials using accepted measurement, survey, and statistical techniques.

“Dosimetry processor” means an individual or an organization that processes and evaluates individual monitoring devices in order to determine the radiation dose delivered to the monitoring devices.

“Filtering face piece (dust mask)” means a particulate respirator that operates under a negative pressure with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium, not equipped with elastomeric sealing surfaces and adjustable straps.

“Fit factor” means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

“Fit test” means the use of protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

“Helmet” means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

“Hood” means a respiratory inlet covering that completely covers the head, neck, and may also cover portions of the shoulders and torso.

“Inhalation class” (See “Class”)

“Loose-fitting face piece” means a respiratory inlet covering that is designed to form a partial seal with the face.

“Lung class” (See “Class”)

“Nationally tracked source” means a sealed source that contains a quantity equal to or greater than Category 1 or Category 2 levels of radioactive material listed in 10 CFR 20, Appendix E, revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. In this context sealed source does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, sub-assembly, fuel rod, or fuel pellet.

“Negative pressure respirator (tight fitting)” means respiratory protective equipment in which the air pressure inside the face piece is negative during inhalation with respect to the ambient air pressure outside the respirator.

“Nonstochastic effect” means a health effect, the severity of which varies with the dose and for which a threshold is believed to exist. Radiation-induced cataract formation is an example of a nonstochastic effect. For purposes of these rules, “deterministic effect” is an equivalent term and “threshold” means that which if not exceeded, poses no risk or likelihood of an effect to occur.

“Planned special exposure” means an infrequent exposure to radiation received while employed, but separate from and in addition to the annual occupational dose limits.

“Positive pressure respirator” means respiratory protective equipment in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

“Powered air-purifying respirator” or “PAPR” means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

“Pressure demand respirator” means a positive pressure, atmosphere-supplying respirator that admits breathing air to the face piece when the positive pressure is reduced inside the face piece by inhalation.

“Probabilistic effect” (See “Stochastic effect”)

“Qualitative fit test” or “QLFT” means a pass or fail fit test to assess the adequacy of respirator fit that relies on the individual’s response to the test agent.

“Quantitative fit test” or “QNFT” means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

“Reference Man” means a hypothetical aggregation of human physical and physiological characteristics determined by international consensus. These characteristics may be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base. A description of Reference Man is contained in the International Commission on Radiological Protection report, ICRP

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Publication 23, "Report of the Task Group on Reference Man," published in 1975 by Pergamon Press, incorporated by reference and on file with the Agency and the Office of the Secretary of State. This incorporation by reference contains no future editions or amendments.

"Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, or other media at a site, resulting from activities under a licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials that remain at the site because of routine or accidental release of radioactive material at the site or a previous burial at the site, even if the licensee complied with reagent provisions of 12 A.A.C. 1.

"Respiratory protective equipment" means an apparatus, such as a respirator, used to reduce an individual's intake of air-borne radioactive materials.

"Sanitary sewerage" means a system of public sewers for carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned or operated by the licensee or registrant.

"Self-contained breathing apparatus" or "SCBA" means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

"Stochastic effect" means a health effect that occurs randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose without a threshold. Hereditary effects and cancer incidence are examples of stochastic effects. For purposes of these rules, "probabilistic effect" is an equivalent term.

"Supplied-air respirator" or "SAR" or "airline respirator" means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

"Tight-fitting face piece" means a respiratory inlet covering that forms a complete seal with the face.

"User seal check" or "fit check" means an action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

"Very-high radiation area" means an area, accessible to individuals, in which radiation levels from radiation sources external to an individual's body could result in the individual receiving an absorbed dose in excess of 5 Gy (500 rad) in one hour at one meter from a radiation source or one meter from any surface that the radiation penetrates. (At very high doses received at high dose rates, units of absorbed dose, the gray and rad should be used, rather than units of dose equivalent, the sievert and rem).

"Weighting factor" w_T for an organ or tissue (T) means the proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of w_T are:

ORGAN DOSE WEIGHTING FACTORS	
Organ or Tissue	w_T
Gonads	0.25
Breast	0.15

Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder	0.30 ^a
Whole Body	1.00 ^b

^a 0.30 results from 0.06 for each of five "remainder" organs, excluding the skin and the lens of the eye, that receive the highest doses.

^b For the purpose of weighting the external whole body dose, for adding it to the internal dose, a single weighting factor, $w_T = 1.0$, has been specified. The use of other weighting factors for external exposure will be approved by the Agency on a case-by-case basis.

Historical Note

Former Rule Section D.3, Former Section R12-1-403 repealed, new Section R12-1-403 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-404. Units and Quantities

- A. Each licensee or registrant shall use the Standard International (SI) units becquerel, gray, sievert, and coulomb per kilogram, or the special units curie, rad, rem, and roentgen, including multiples and subdivisions, and shall clearly indicate the units of all quantities on records required by this Article.
- B. The licensee or registrant shall make a clear distinction among the quantities entered on the records required by this Article, such as, total effective dose equivalent, total organ dose equivalent, shallow dose equivalent, lens dose equivalent, deep dose equivalent, or committed effective dose equivalent.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-405. Form of Records

- A. A licensee or registrant shall ensure that each record required by this Article is legible throughout the specified retention period. The record shall be the original, a reproduced copy, or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. As an alternative the record may be stored in electronic media capable of producing legible records during the required retention period. Records, such as letters, drawings, and specifications, shall include all pertinent information, such as stamps, initials, and signatures. A licensee or registrant shall maintain adequate safeguards against tampering with and loss of records.
- B. In the records required by this Article, a licensee or registrant may record quantities in SI units in parentheses following each of the required units, curie, rad, and rem, and include multiples and subdivisions.

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- C. Notwithstanding subsection (B), the licensee or registrant shall ensure that information is recorded in the International System of Units (SI) or in SI and the units specified in subsection (B) on each shipment manifest as required in R12-1-439(A).
- D. A licensee or registrant shall make a clear distinction among the quantities entered on the records required by this Section (e.g., total effective dose equivalent, shallow-dose equivalent, lens dose equivalent, deep-dose equivalent, committed effective dose equivalent).

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-406. Implementation

Any existing license or registration condition that is more restrictive than this Article remains in force until amendment or renewal of the license or registration.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-407. Radiation Protection Programs

- A. Each licensee or registrant shall develop, document, and implement a radiation protection program sufficient to ensure compliance with the provisions of Article 4.
- B. The licensee or registrant shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and public doses that are as low as is reasonably achievable (ALARA).
- C. The licensee or registrant shall, at intervals not to exceed 12 months, review the radiation protection program content and implementation.
- D. To implement the ALARA requirements in subsection (B), and notwithstanding the requirements in R12-1-416, each licensee or registrant governed by A.A.C. Title 12, Chapter 1, Article 3 shall limit air emissions of radioactive material to the environment so that individual members of the public likely to receive the highest dose will not receive a total effective dose equivalent in excess of 0.1mSv (10 mrem) per year from the emissions. If a licensee or registrant subject to this requirement exceeds this limit, the licensee or registrant shall report the incident to the Agency, in accordance with R12-1-444, and take prompt corrective action to prevent additional violations.
- E. Records.
1. Each licensee or registrant shall maintain records of the radiation protection program, including:
 - a. The provisions of the program; and
 - b. Audits and other reviews of program content and implementation.
 2. A licensee or registrant shall retain the records required by subsection (E)(1)(a) for three years after the termination of the license or registration. The licensee or registrant shall retain the records required by subsection (E)(1)(b) for three years after the record is made.
 3. The following licensees and registrants are exempt from the record requirements contained in this subsection:
 - B6-General Medical
 - C9-Gas Chromatograph

C10-General Industrial
 D15-Possession Only
 E2-X-ray Machine class B
 E3-X-ray Machine class C

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-408. Occupational Dose Limits for Adults

- A. Each licensee or registrant shall control the occupational dose to individual adults, except for planned special exposures required in R12-1-413, to the following dose limits:
1. An annual limit, which is the more limiting of:
 - a. The total effective dose equivalent being equal to 0.05 Sv (5 rem): or
 - b. The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 0.5 Sv (50 rem).
 2. The annual limits to the lens of the eye, to the skin, and to the extremities which are:
 - a. A lens dose equivalent of 0.15 Sv (15 rem), and
 - b. A shallow dose equivalent of 0.5 Sv (50 rem) to the skin of the whole body or to the skin of any extremity.
- B. Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, shall be subtracted from the limits for planned special exposures that the individual may receive during the current year and during the individual's lifetime. See R12-1-413.
- C. The assigned deep-dose equivalent and shallow-dose equivalent are, for the portion of the body receiving the highest exposure, determined as follows:
1. The deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.
 2. If a protective apron is worn and monitoring is conducted as specified in R12-1-419(B), the effective dose equivalent for external radiation shall be determined as follows:
 - a. If only one individual monitoring device is used and it is located at the neck outside the protective apron, and the reported dose exceeds 25% of the limit specified in R12-1-408(A), the reported deep-dose equivalent value multiplied by 0.3 is the effective dose equivalent for external radiation; or
 - b. When individual monitoring devices are worn, both under the protective apron at the waist and outside the protective apron at the neck, the effective dose equivalent for external radiation is assigned the value of the sum of the deep-dose equivalent reported for the individual monitoring device located at the waist under the protective apron multiplied by 1.5 and the deep-dose equivalent reported for the individual monitoring device located at the neck outside the protective apron multiplied by 0.04.

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3. When the external exposure is determined by measurement with an external personal monitoring device, the deep-dose equivalent must be used in place of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the Agency. The assigned deep-dose equivalent shall be determined for the part of the body that receives the highest exposure. The assigned shallow-dose equivalent is the dose averaged over the contiguous 10 square centimeters of skin that receives the highest exposure. The deep-dose equivalent, lens-dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.
- D. Derived air concentration (DAC) and annual limit on intake (ALI) values are presented in Table I of Appendix B and may be used to determine the individual's dose and to demonstrate compliance with the occupational dose limits.
- E. Notwithstanding the annual dose limits, the licensee shall limit the soluble Uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity. See footnote 3 of Appendix B.
- F. The licensee or registrant shall reduce the dose that an individual may receive in the current year by the amount of occupational dose received while employed occupationally as a radiation worker by all previous employers. See R12-1-412.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-409. Summation of External and Internal Doses

- A. If a licensee or registrant is required to monitor according to both R12-1-419(B) and (C), the licensee or registrant shall add external and internal doses, and use the sum to demonstrate compliance with dose limits. If the licensee or registrant is required to monitor only according to R12-1-419(B) or only according to R12-1-419(C), summation is not required to demonstrate compliance with dose limits. The licensee or registrant may demonstrate compliance with the requirements for summation of external and internal doses according to subsections (B), (C), and (D). The dose equivalents for the lens of the eye, the skin, and the extremities are not included in the summation but are subject to separate limits (see R12-1-408(A)(2)).
- B. If the only intake of radionuclides is by inhalation, the total effective dose equivalent limit is not exceeded if the sum of the deep-dose equivalent divided by the total effective dose equivalent limit, and one of the following, does not exceed unity (1):
 1. The sum of the fractions of the inhalation ALI for each radionuclide, or
 2. The total number of derived air concentration-hours (DAC-hours) for all radionuclides divided by 2,000, or
 3. The sum of the calculated committed effective dose equivalents to all significantly irradiated organs or tissues

(T) calculated from bioassay data using applicable biological models and expressed as a fraction of the annual limit. For purposes of this requirement, an organ or tissue is deemed to be significantly irradiated if, for that organ or tissue, the product of the weighting factors, W_T , and the committed dose equivalent, $H_{T,50}$, per unit intake is greater than 10% of the maximum weighted value of $H_{T,50}$, that is, $w_T H_{T,50}$, per unit intake for any organ or tissue.

- C. If the occupationally exposed individual also receives an intake of radionuclides by oral ingestion greater than 10% of the applicable oral ALI, the licensee or registrant shall account for this intake and include it in demonstrating compliance with the limits.
- D. The licensee or registrant shall evaluate and, to the extent practical, account for intakes through wounds or skin absorption. The intake through intact skin has been included in the calculation of DAC for Hydrogen-3 and does not need to be evaluated or accounted for according to this subsection.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-410. Determination of External Dose from Airborne Radioactive Material

- A. Each licensee shall, when determining the dose from airborne radioactive material, include the contribution to the deep-dose equivalent, lens dose equivalent, and shallow dose equivalent from external exposure to the radioactive cloud. See Appendix B, footnotes 1 and 2.
- B. Airborne radioactivity measurements and DAC values shall not be used as the primary means to assess the deep-dose equivalent when the airborne radioactive material includes radionuclides other than noble gases or if the cloud of airborne radioactive material is not relatively uniform. The determination of the deep-dose equivalent to an individual shall be based upon measurements using instruments or individual monitoring devices.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended effective June 20, 1990 (Supp. 90-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-411. Determination of Internal Exposure

- A. For purposes of assessing dose used to determine compliance with occupational dose equivalent limits, each licensee or registrant shall, when required according to R12-1-419, take suitable and timely measurements of:
 1. Concentrations of radioactive materials in air in work areas,
 2. Quantities of radionuclides in the body,
 3. Quantities of radionuclides excreted from the body, or
 4. Combinations of these measurements,
- B. Unless respiratory protective equipment is used, as provided in R12-1-425, or the assessment of intake is based on bioassays, the licensee or registrant shall assume that an individual inhales radioactive material at the airborne concentration in which the individual is present.

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- C. When specific information on the physical and biochemical properties of the radionuclides taken into the body or the behavior of the material in an individual is known, the licensee or registrant may:
1. Use that information to calculate the committed effective dose equivalent, and, if used, the licensee or registrant shall document that information in the individual's record;
 2. Upon prior approval of the Agency, adjust the DAC or ALI values to reflect the actual physical and chemical characteristics of airborne radioactive material, for example, aerosol size distribution or density; and
 3. Separately assess the contribution of fractional intakes of Class D, W, or Y compounds of a given radionuclide to the committed effective dose equivalent. See Appendix B.
- D. If the licensee or registrant chooses to assess intakes of Class Y material using the measurements given in subsection (A)(2) or (3), the licensee or registrant may delay the recording and reporting of the assessments for periods up to seven months, unless otherwise required by R12-1-444 or R12-1-445. This delay permits the licensee or registrant to make additional measurements basic to the assessments.
- E. If the identity and concentration of each radionuclide in a mixture are known, the fraction of the DAC applicable to the mixture for use in calculating DAC-hours is either:
1. The sum of the ratios of the concentration to the appropriate DAC value, that is, D, W, or Y from Appendix B for each radionuclide in the mixture; or
 2. The ratio of the total concentration for all radionuclides in the mixture to the most restrictive DAC value for any radionuclide in the mixture.
- F. If the identity of each radionuclide in a mixture is known, but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture is the most restrictive DAC of any radionuclide in the mixture.
- G. If a mixture of radionuclides in air exists, a licensee may disregard certain radionuclides in the mixture if:
1. The licensee uses the total activity of the mixture to demonstrate compliance with the dose limits in R12-1-408 and complies with the monitoring requirements in R12-1-419;
 2. The concentration of any radionuclide disregarded is less than 10% of its DAC; and
 3. The sum of these percentages for all of the radionuclides disregarded in the mixture does not exceed 30%.
- H. When determining the committed effective dose equivalent, the following information may be considered:
1. In order to calculate the committed effective dose equivalent, the licensee may assume that the inhalation of 1 ALI, or an exposure of 2,000 DAC-hours, results in a committed effective dose equivalent of 0.05 Sv (5 rem) for radionuclides that have their ALIs or DACs based on the committed effective dose equivalent.
 2. For an ALI and the associated DAC determined by the nonstochastic organ dose limit of 0.5 Sv (50 rem), the intake of radionuclides that would result in a committed effective dose equivalent of 0.05 Sv (5 rem), that is, the stochastic ALI, is listed in parentheses in Table I of Appendix B. The licensee may, as a simplifying assumption, use the stochastic ALI to determine committed effective dose equivalent. However, if the licensee or registrant uses the stochastic ALI, the licensee shall also demonstrate that the limit in R12-1-408(A)(1)(b) is met.
- repealed, new Section R12-1-411 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended subsection (F) effective June 26, 1987 (87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
- R12-1-412. Determination of Prior Occupational Dose**
- A. For each individual who is likely to receive in a year an occupational dose that requires monitoring according to R12-1-419 the licensee shall:
1. Determine the occupational radiation dose received during the current year, and
 2. Attempt to obtain the records of lifetime cumulative occupational radiation dose.
- B. Before permitting an individual to participate in a planned special exposure, the licensee or registrant shall determine:
1. The internal and external doses from all previous planned special exposures; and
 2. All doses in excess of the limits received during the lifetime of the individual, including doses received during accidents and emergencies; and
 3. All lifetime, cumulative, occupational radiation doses.
- C. In complying with the requirements of subsection (A), a licensee or registrant shall:
1. Accept, as a record of the occupational dose that the individual received during the current year, a written and signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that discloses the nature and the amount of any occupational dose that the individual received during the current year; and
 2. Accept, as the record of lifetime cumulative radiation dose, an up-to-date Agency Form Y (available from the Agency) or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant; and
 3. Obtain reports of the individual's dose equivalent from the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant, by telephone, telegram, facsimile, or letter. The licensee or registrant shall request a written verification of the dose data if the authenticity of the transmitted report cannot be established.
- D. Records.
1. The licensee or registrant shall record the exposure history, as required by subsection (A), on Agency Form Y (available from the Agency) or a similar clear and legible record of all the information required by this subsection. The form or record shall show each period in which the individual received occupational exposure to radiation or radioactive material and shall be signed by the individual who received the exposure. For each period for which the licensee or registrant obtains reports, the licensee or registrant shall use the dose shown in the report for preparing Agency Form Y or its equivalent. For any period in which the licensee or registrant does not obtain a report, the licensee or registrant shall place a notation on Agency Form Y or its equivalent indicating each period of time for which there is no data.
 2. The licensee or registrant is not required to reevaluate the separate external dose equivalents and internal committed

Historical Note

Former Rule Section D.101; Former Section R12-1-411

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dose equivalents or intakes of radionuclides assessed according to the rules in Article 4 in effect before January 1, 1994. Occupational exposure histories obtained and recorded on Agency Form Y or its equivalent before January 1, 1994, would not have included effective dose equivalent but may be used in the absence of specific information on the intake of radionuclides by the individual.

3. If the licensee or registrant is unable to obtain a complete record of an individual's current and previously accumulated occupational dose, the licensee or registrant shall:
 - a. In establishing administrative controls under R12-1-408(F) for the current year, reduce the allowable dose limit for the individual by 12.5 mSv (1.25 rem) for each quarter for which records were unavailable and the individual was engaged in activities that could have resulted in occupational radiation exposure; and
 - b. Not subject the individual to planned special exposures.
4. The licensee or registrant shall retain current and prior records on Agency Form Y or its equivalent for three years after the Agency terminates each pertinent license or registration requiring this record. The licensee or registrant shall retain records used in preparing Agency Form Y or its equivalent for three years after the record is made.

Historical Note

Former Rule Section D.102; Former Section R12-1-412 repealed, new Section R12-1-412 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-413. Planned Special Exposures

- A. A licensee or registrant may authorize an adult worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in R12-1-408, provided that each of the following conditions is satisfied:
 1. The licensee or registrant authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid the dose estimated from the planned special exposure are unavailable or impractical.
 2. The licensee or registrant, and employer if the employer is not the licensee or registrant, specifically authorizes the planned special exposure, in writing, before the exposure occurs.
 3. Before a planned special exposure, the licensee or registrant ensures that each individual involved is:
 - a. Informed in writing of the purpose of the planned special exposure;
 - b. Informed in writing of the estimated doses, associated potential risks, and specific radiation levels or other conditions that might be involved in performing the task; and
 - c. Instructed in the measures to be taken to keep the dose ALARA, considering other risks that may be present.
 4. Before permitting an individual to participate in a planned special exposure, the licensee or registrant shall ascertain prior doses as required by R12-1-412(B) for each individual involved.
 5. Subject to R12-1-408(B), the licensee or registrant shall not authorize a planned special exposure that would cause

an individual to receive a dose from all planned special exposures and all doses that exceed:

- a. The numerical value of any of the dose limits in R12-1-408(A) in any year, and
 - b. Five times the annual dose limits in R12-1-408(A) during the individual's lifetime.
6. The licensee or registrant shall maintain records of a planned special exposure in accordance with subsections (B) and (C) and submit a written report to the Agency within 30 days after the date of any planned special exposure conducted in accordance with this Section, informing the Agency that a planned special exposure was conducted and indicating the date the planned special exposure occurred and the information required by subsection (B).
 7. The licensee or registrant shall record the best estimate of the dose resulting from the planned special exposure in the individual's record and inform the individual, in writing, of the dose within 30 days after the date of the planned special exposure. The dose from a planned special exposure shall not be considered in controlling future occupational dose of the individual according to R12-1-408(A) but shall be included in evaluations required by subsections (A)(4) and (A)(5).

B. Records.

1. For each planned special exposure, the licensee or registrant shall maintain records that describe:
 - a. The exceptional circumstances requiring the use of a planned special exposure,
 - b. The name of the management official who authorized the planned special exposure and a copy of the signed authorization,
 - c. What actions were necessary,
 - d. Why the actions were necessary,
 - e. What precautions were taken to assure that doses were minimized in accordance with R12-1-407(B),
 - f. What individual and collective doses were expected,
 - g. The doses actually received in the planned special exposure, and
 - h. The process through which the employee involved in the planned special exposure has been informed in writing of the information contained in subsection (A)(3).
2. The licensee or registrant shall retain the records for three years after the Agency terminates each pertinent license or registration.

- C. A licensee shall submit a report to the Agency no later than 30 days after a planned special exposure conducted in accordance with subsection (A). The report shall contain the date of the planned exposure and the information required by subsection (B).

Historical Note

Former Rule Section D.103. Former Section R12-1-413 repealed, new Section R12-1-413 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-414. Occupational Dose Limits for Minors

The annual occupational dose limits for minors are 10% of the annual occupational dose limits specified for adult workers in R12-1-408.

Historical Note

Former Rule Section D. 104; Former Section R12-1-414 repealed, new Section R12-1-414 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3).

R12-1-415. Dose Equivalent to an Embryo or Fetus

- A.** A licensee or registrant shall ensure that the dose equivalent to an embryo or fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 5 mSv (0.5 rem). Records shall be maintained according to R12-1-419(D)(4) and (5).
- B.** The licensee or registrant shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman to satisfy the limit in subsection (A).
- C.** For purposes of this Section, the dose equivalent to the embryo or fetus is the sum of:
1. The deep-dose equivalent to the declared pregnant woman; and
 2. The dose equivalent to the embryo or fetus resulting from radionuclides in the embryo or fetus and radionuclides in the declared pregnant woman.
- D.** If the dose equivalent to the embryo or fetus is found to have exceeded 5 mSv (0.5 rem) or is within 0.5 mSv (0.05 rem) of this dose by the time the woman declares the pregnancy to the licensee or registrant, the licensee or registrant shall be deemed to be in compliance with subsection (A) if the additional dose equivalent to the embryo or fetus does not exceed 0.5 mSv (0.05 rem) during the remainder of the pregnancy.

Historical Note

Former Rule Section D. 105; Former Section R12-1-415 repealed, new Section R12-1-415 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-416. Dose Limits for Individual Members of the Public

- A.** Each licensee or registrant shall conduct operations so that:
1. The total effective dose equivalent to any individual member of the public from the licensed or registered operation does not exceed 1 mSv (0.1 rem) in a year, excluding the dose contribution from background radiation, medical administration of radiation, exposure to an individual who has been administered radioactive material and released in accordance with R12-1-719, voluntary participation in a medical research program, and the licensee's or registrant's disposal of radioactive material into sanitary sewerage in accordance with R12-1-436; and
 2. The dose in any unrestricted area from an external source excluding the dose contribution from an individual who has been administered radioactive material and released in accordance with R12-1-719, does not exceed 0.02 mSv (0.002 rem) in any one hour.
- B.** Registrants possessing radiation machines in operation before August 10, 1994, are exempt from the requirement in subsection (A)(1). Operation of these machines shall be conducted so that the total effective dose equivalent to any individual member of the public does not exceed 5 mSv (0.5 rem) in a year.
- C.** A licensee, registrant, or an applicant for a license or registration may apply for Agency authorization to operate with an

annual dose limit of 5 mSv (0.5 rem) for an individual member of the public. The application shall include the following information:

1. An explanation of the need for and the expected duration of operations in excess of the limit in subsection (A), and
 2. The licensee's or registrant's program to assess and control dose within the 5 mSv (0.5 rem) annual limit; and
 3. The procedures to be followed to maintain the dose in accordance with R12-1-407(B).
- D.** A licensee or registrant shall comply with the U.S. Environmental Protection Agency's applicable environmental radiation standards in 40 CFR 190, 2003 edition, published July 1, 2003, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which are incorporated by reference, on file with the Agency and contain no future editions or amendments.
- E.** The Agency may impose additional restrictions on radiation levels in unrestricted areas and on the total quantity of radionuclides that a licensee or registrant may release in effluents in order to restrict the collective dose.
- F.** Each licensee or registrant shall make or cause to be made surveys of radiation levels in unrestricted areas and radioactive materials contained in effluents released to unrestricted areas.
- G.** Each licensee or registrant shall:
1. Demonstrate by measurement or calculation that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed or registered operation does not exceed the annual dose limit; or
 2. Demonstrate that:
 - a. The annual average concentrations of radioactive material released in gaseous and liquid effluents at the boundary of the unrestricted area do not exceed the values specified in Appendix B, Table II; and
 - b. If an individual were continually present in an unrestricted area, the dose from external sources would not exceed 0.02 mSv (0.002 rem) in an hour and 0.5 mSv (0.05 rem) in a year.
- H.** Upon approval from the Agency, the licensee or registrant may adjust the effluent concentration values in Appendix B, Table II for members of the public, to take into account the actual physical and chemical characteristics of the effluents, such as aerosol size distribution, solubility, density, radioactive decay equilibrium, and chemical form.
- I.** Each licensee or registrant shall maintain records sufficient to demonstrate compliance with the dose limit for individual members of the public and shall retain the records for three years after the Agency terminates each pertinent license or registration.

Historical Note

Former Rule Section D. 106; Former Section R12-1-416 repealed, new Section R12-1-416 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-417. Testing for Leakage or Contamination of Sealed Sources

- A.** A licensee in possession of any sealed source shall ensure that:
1. Each sealed source, except as specified in subsection (B), is tested for leakage or contamination and the test results are received before the sealed source is put into use unless the licensee has a certificate from the transferor indicating that the sealed source was tested within six months before transfer to the licensee or registrant.

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2. Each sealed source that is not designed to emit alpha particles is tested for leakage or contamination at intervals not to exceed six months or at alternative intervals approved by the Agency, after evaluation of information specified by R12-1-311(D)(2) and (D)(3), or equivalent information specified by an Agreement State, a Licensing State, or the U.S. Nuclear Regulatory Commission.
 3. Each sealed source that is designed to emit alpha particles is tested for leakage or contamination at intervals not to exceed three months or at alternative intervals approved by the Agency, after evaluation of information specified by R12-1-311(D)(2) and (D)(3), or equivalent information specified by an Agreement State, a Licensing State, or the Nuclear Regulatory Commission.
 4. Each sealed source suspected of damage or leakage is tested for leakage or contamination before further use.
 5. Tests for leakage for all sealed sources, except brachytherapy sources manufactured to contain radium, are capable of detecting the presence of 185 Bq (0.005 μ Ci) of radioactive material on a test sample. The person conducting the test shall take test samples from the sealed source or from the surfaces of the container in which the sealed source is stored or mounted on which contamination could accumulate. For a sealed source contained in a device, the person conducting the test shall obtain test samples when the source is in the "off" position.
 6. The test for leakage from brachytherapy sources containing radium is capable of detecting an absolute leakage rate of 37 Bq (0.001 μ Ci) of Radon-222 in a 24-hour period when the collection efficiency for Radon-222 and its daughters has been determined with respect to collection method, volume, and time.
 7. Tests for contamination from radium daughters are taken on the interior surface of brachytherapy source storage containers and are capable of detecting the presence of 185 Bq (0.005 μ Ci) of a radium daughter which has a half-life greater than four days.
- B.** A licensee need not perform tests for leakage or contamination on the following sealed sources:
1. Sealed sources containing only radioactive material with a half-life of less than 30 days;
 2. Sealed sources containing only radioactive material as a gas;
 3. Sealed sources containing 3.7 MBq (100 μ Ci) or less of beta or photon-emitting material or 370 kBq (10 μ Ci) or less of alpha-emitting material;
 4. Sealed sources containing only Hydrogen-3;
 5. Seeds of Iridium-192 encased in nylon ribbon; and
 6. Sealed sources, except teletherapy and brachytherapy sources, which are stored, not being used, and identified as in storage. The licensee shall test each sealed source for leakage or contamination and receive the test results before any use or transfer unless it has been tested for leakage or contamination within six months before the date of use or transfer.
- C.** Persons specifically authorized by the Agency, an Agreement State, a Licensing State, or the U.S. Nuclear Regulatory Commission shall perform tests for leakage or contamination from sealed sources.
- D.** A licensee shall maintain for Agency inspection test results in units of becquerel or microcurie.
- E.** The following is considered evidence that a sealed source is leaking:
1. The presence of 185 Bq (0.005 μ Ci) or more of removable contamination on any test sample.
 2. Leakage of 37 Bq (0.001 μ Ci) of Radon-222 per 24 hours for brachytherapy sources manufactured to contain radium.
 3. The presence of removable contamination resulting from the decay of 185 Bq (0.005 μ Ci) or more of radium.
- F.** A licensee shall immediately withdraw a leaking sealed source from use and shall take action to prevent the spread of contamination. The leaking sealed source shall be repaired or disposed of in accordance with this Article.
- G.** A licensee shall file a report with the Agency within five days if the test for leakage or contamination indicates a sealed source is leaking or contaminated. The report shall include the equipment involved, the test results, and the corrective action taken.
- H.** A licensee shall maintain records of the tests for leakage required in subsection (A) for three years after the records are made.

Historical Note

Former Rule Section D. 107; Former Section R12-1-417 repealed, new Section R12-1-417 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-418. Surveys and Monitoring

- A.** Each licensee or registrant shall make, or cause to be made, surveys if surveys are:
1. Necessary for the licensee or registrant to comply with Article 4, and
 2. Reasonable under the circumstances to evaluate:
 - a. The magnitude and extent of radiation levels, and
 - b. Concentrations or quantities of residual radioactivity, and
 - c. The potential radiological hazards of the radiation levels and residual radioactivity detected.
- B.** All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremity, that require processing to determine the radiation dose and that are used by licensees and registrants to comply with R12-1-408, with other applicable provisions of these rules, or with conditions specified in a license or registration shall be processed and evaluated by a dosimetry processor:
1. Holding current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology, according to NVLAP procedures published March 1994 as NIST Handbook 150, and NIST Handbook 150-4, published August 1994, which is incorporated by reference, published by the U.S. Government Printing Office, Washington D.C. 20402-9325, and on file with the Agency. The material incorporated by reference contains no future editions or amendments; and
 2. Approved in this accreditation process for the type of radiation or radiations included in the NVLAP program that most closely approximates the type of radiation or radiations for which the individual wearing the dosimeter is monitored.
- C.** The licensee or registrant shall ensure that adequate precautions are taken to prevent a deceptive exposure of an individual monitoring device and that personnel monitoring devices are issued to, and used by only the individual to whom the monitoring device has been first issued during any reporting period.

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- D.** A licensee shall ensure that survey instruments and personnel dosimeters that are used to make quantitative measurements are calibrated in accordance with R12-1-449.
- E.** Records.
1. Each licensee or registrant shall maintain records showing the results of surveys required by this Section and R12-1-433(B). The licensee or registrant shall retain these records for three years after the record is made.
 2. The licensee or registrant shall retain each of the following records for three years after the Agency terminates the license or registration:
 - a. Records of the survey results used to determine the dose from external sources of radiation, in the absence of or in combination with individual monitoring data, and provide an assessment of individual dose equivalents;
 - b. Records of the results of measurements and calculations used to determine individual intakes of radioactive material and to assess an internal dose;
 - c. Records showing the results of air sampling, surveys, and bioassays required according to R12-1-425(A)(3)(a) and (b); and
 - d. Records of the measurement and calculation results used to evaluate the release of radioactive effluents to the environment.

Historical Note

Former Rule Section D. 108; Former Section R12-1-418 repealed, new Section R12-1-418 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-419. Conditions Requiring Individual Monitoring of External and Internal Occupational Dose

- A.** Each licensee or registrant shall monitor exposures from sources of radiation at levels sufficient to demonstrate compliance with the occupational dose limits of this Article.
- B.** At minimum each licensee or registrant shall supply and require the use of individual monitoring devices by the following personnel:
1. Adults likely to receive, in one year, an intake in excess of 10% of the applicable ALI in Table I, Columns 1 and 2, of Appendix B;
 2. Minors and declared pregnant women likely to receive, in one year, a committed effective dose equivalent in excess of 0.5 mSv (0.05 rem);
 3. Adults likely to receive, in one year from radiation sources external to the body, a dose in excess of 10 percent of the limits in R12-1-408(A);
 4. Minors likely to receive, in one year, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem), a lens dose equivalent in excess of 1.5 mSv (0.15 rem), or a shallow dose equivalent to the skin or to the extremities in excess of 5 mSv (0.5 rem);
 5. Declared pregnant women likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem) (Note: All of the occupational doses in R12-1-408 continue to be applicable to the declared pregnant worker as long as the embryo/fetus dose limit is not exceeded.); and
6. Individuals entering a high or very high radiation area;
 7. Individuals operating mobile x-ray equipment, except dental intraoral systems, as described in R12-1-608;
 8. Individuals holding animals for diagnostic x-ray procedures, as described in R12-1-613;
 9. Individuals servicing enclosed beam x-ray systems with bypassed interlocks, as described in R12-1-803;
 10. Individuals operating open beam fluoroscopic systems and ancillary personnel working in the room when the fluoroscopic system is in use, except when relieved of this requirement by registration condition;
 11. Individuals performing well logging, as described in Article 17; and
 12. Individuals, wearing a finger or wrist individual monitoring device, during the operation of an open-beam or hand held analytical x-ray system or equipment with no safety devices as described in R12-1-806(C) and (F).
 13. Individuals, wearing a finger or wrist individual monitoring device, performing repairs that require the presence of a primary beam of the analytical x-ray system or equipment, as described in R12-1-806(C) and (F).
- C.** Each licensee shall monitor the occupational intake of radioactive material by and assess the committed effective dose equivalent to:
1. Adults likely to receive, in one year, an intake in excess of 10 percent of the applicable ALI in Table I, Columns 1 and 2, of Appendix B;
 2. Minors likely to receive, in one year, a committed effective dose equivalent in excess of 1 mSv (0.1 rem); and
 3. Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 1 mSv (0.1 rem).
- D.** Each licensee or registrant shall require that all individual monitoring devices be located on individuals according to the following requirements:
1. An individual monitoring device, used to obtain the dose equivalent to an embryo or fetus of a declared pregnant woman according to R12-1-415, shall be located under the protective apron at the waist. A qualified expert shall be consulted to determine the dose equivalent to the embryo or fetus if this individual monitoring device has a monthly reported dose equivalent value that exceeds 0.5 millisieverts (50 millirem). For purposes of this subsection, the value for determining the dose equivalent to an embryo or fetus under R12-1-415(C), for occupational exposure to radiation from medical fluoroscopic equipment, is the value reported by the individual monitoring device worn at the waist underneath the protective apron, which has been corrected for the particular individual and the work environment by a qualified expert.
 2. An individual monitoring device used for lens dose equivalent shall be located at the neck or an unshielded location closer to the eye, outside the protective apron.
 3. If only one individual monitoring device is used to determine the effective dose equivalent for external radiation, according to R12-1-408(C)(2)(a), the device shall be located at the neck outside the protective apron. If a second individual monitoring device is used for the same purpose, it shall be located under the protective apron at the waist. A second individual monitoring device is required for a declared pregnant woman.

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4. An individual, wearing an extremity personnel monitoring device, during the operation of an open-beam or hand-held analytical x-ray system with no safety devices or an individual performing repairs in the presence of a primary beam of the analytical x-ray system or equipment, as described in R12-1-806(C) and (F), shall wear the device on the individual's finger or wrist.
- E. Records.**
1. Each licensee or registrant shall maintain records of doses received by all individuals for whom monitoring is required according to this Section, and records of doses received during planned special exposures, accidents, and emergency conditions. Assessments of dose equivalent and records made using units in effect before January 1, 1994, need not be changed. These records shall include, when applicable:
 - a. The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin, and shallow-dose equivalent to the extremities;
 - b. The estimated intake of radionuclides;
 - c. The committed effective dose equivalent assigned to the intake of radionuclides;
 - d. The specific information used to assess the committed effective dose equivalent according to R12-1-411(A) and (C), and when required R12-1-419.
 - e. The total effective dose equivalent when required by R12-1-409; and
 - f. The total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose;
 2. The licensee or registrant shall make entries of the records specified in subsection (D)(1), at intervals not to exceed one year;
 3. The licensee or registrant shall maintain at the inspection site the records specified in subsection (D)(1), on Agency Form Z (available from the Agency), in accordance with the instructions for Agency Form Z, or in clear and legible records containing all the information required by this subsection;
 4. The licensee or registrant shall maintain the records of dose to an embryo or fetus with the records of dose to the declared pregnant woman. The declaration of pregnancy, including the estimated date of conception, shall also be kept on file but may be maintained separately from the dose records;
 5. The licensee or registrant shall retain each required form or record for three years after the Agency terminates each pertinent license or registration requiring the record.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-420. Control of Access to High Radiation Areas

- A.** A licensee or registrant shall ensure that each entrance or access point to a high radiation area has one or more of the following features:
1. A control device that, upon entry into the area, causes the level of radiation to be reduced below the level at which an individual might receive a deep-dose equivalent of 1 mSv (0.1 rem) in one hour at 30 centimeters from the source from any surface that the radiation penetrates;
 2. A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry; or
 3. Entryways that are locked, except during periods when access to the areas is required, with positive control over each individual entity.
- B.** In place of the controls required by subsection (A) for a high radiation area, the licensee or registrant may substitute continuous direct or electronic surveillance that is capable of preventing unauthorized entry.
- C.** The licensee or registrant may apply to the Agency for approval of alternative methods for controlling access to high radiation areas.
- D.** The licensee or registrant shall establish the controls required by subsections (A) and (C) in a way that does not prevent individuals from leaving a high radiation area.
- E.** The licensee or registrant is not required to control each entrance or access point to a room or other area that is a high radiation area solely because of the presence of radioactive materials prepared for transport and packaged and labeled in accordance with the regulations of the U.S. Department of Transportation, provided that:
1. The packages do not remain in the area longer than three days, and
 2. The dose rate at 1 meter from the external surface of any package does not exceed 0.1 mSv (0.01 rem) per hour.
- F.** The licensee or registrant is not required to control entrance or access to rooms or other areas in hospitals solely because of the presence of patients containing radioactive material, provided that there are personnel in attendance who are taking the necessary precautions to prevent the exposure of individuals to radiation or radioactive material in excess of the established limits in Article 4 and operate in accordance with R12-1-407(B) and the provisions of the licensee's or registrant's radiation protection program.
- G.** The registrant is not required to control entrance or access to rooms or other areas containing sources of radiation capable of producing a high radiation area if the registrant has met all the specific requirements for access and control specified in other applicable Articles of these rules, such as Article 5 for industrial radiography, Article 6 for x-rays in the healing arts, and Article 9 for particle accelerators.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-421. Control of Access to Very-high Radiation Areas

- A.** In addition to the requirements in R12-1-420, a licensee or registrant shall institute measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 5 Gy (500 rad) or more in one hour at 1 meter from a source or from any surface that the radiation penetrates. This requirement does not

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apply to rooms or areas in which diagnostic x-ray systems are the only source of radiation or non-self-shielded irradiators.

- B. The registrant is not required to control entrance or access to rooms or other areas containing sources of radiation capable of producing a very high radiation area, described in subsection (A), if the registrant has met all requirements for access and control specified in other applicable Articles of these rules, such as Article 5 for industrial radiography, Article 6 for x-rays in the healing arts, and Article 9 for particle accelerators.
- C. Each licensee or registrant shall maintain records of tests made according to R12-1-422(B)(9) on entry control devices for very-high radiation areas. These records shall include the date, time, and results of each test of function.
- D. The licensee or registrant shall retain the records required by this Section for three years after the record is made.

Historical Note

Former Rule Section D.201; Former Section R12-1-421 repealed, new Section R12-1-421 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-422. Control of Access to Irradiators (Very-high Radiation Areas)

- A. This Section applies to licensees or registrants with sources of radiation in non-self-shielded irradiators. This Section does not apply to sources of radiation that are used in teletherapy, industrial radiography, or completely self-shielded irradiators in which the source of radiation is both stored and operated within the same shielding radiation barrier and, in the designed configuration of the irradiator, is always physically inaccessible to any individual and cannot create high levels of radiation in an area that is accessible to any individual.
- B. A licensee or registrant shall ensure that each area in which radiation levels may exceed 5 Gy (500 rad) in one hour at 1 meter from a source that is used to irradiate materials meets the following requirements:
 1. Each entrance or access point shall be equipped with entry control devices that:
 - a. Function automatically to prevent any individual from inadvertently entering a very high radiation area;
 - b. Permit deliberate entry into the area only after a control device is actuated that causes the radiation level within the area, from the source of radiation, to be reduced below that at which it would be possible for an individual to receive a deep-dose equivalent in excess of 1 mSv (0.1 rem) in one hour; and
 - c. Prevent operation of the source of radiation if it would produce radiation levels in the area that could result in a deep-dose equivalent to an individual in excess of 1 mSv (0.1 rem) in one hour.
 2. If the control devices required in subsection (B)(1) fail to function, additional control devices shall be provided so that:
 - a. The radiation level within the area, from the source of radiation, is reduced below that at which it would be possible for an individual to receive a deep-dose equivalent in excess of 1 mSv (0.1 rem) in one hour; and
 - b. Conspicuous visible and audible alarm signals are generated so that an individual entering the area is aware of the hazard. The individual who enters the very-high radiation area after an alarm signals shall

be familiar with the process and equipment. Before entering, the individual shall ensure that a second individual is present and aware of the first person's actions.

3. The licensee or registrant shall provide control devices so that, upon failure or removal of physical radiation barriers other than the sealed source's shielded storage container:
 - a. The radiation level from the source of radiation is reduced below that at which it would be possible for an individual to receive a deep-dose equivalent in excess of 1 mSv (0.1 rem) in one hour, and
 - b. Conspicuous visible and audible alarm signals are generated so that potentially affected individuals are aware of the hazard. Potentially affected individuals shall notify the licensee or registrant of the failure or removal of the physical barriers.
4. When the shield for stored sealed sources is a liquid, the licensee or registrant shall provide means to monitor the integrity of the shield and to signal, automatically, loss of adequate shielding.
5. Physical radiation barriers that comprise permanent structural components, such as walls, that have no credible probability of failure or removal in ordinary circumstances need not meet the requirements of subsections (B)(3) and (4).
6. The licensee or registrant shall equip each area with devices that will automatically generate conspicuous visible and audible alarm signals to alert personnel in the area before the source of radiation can be put into operation and in time for any individual in the area to operate a clearly identified control device, installed in the area, and which can prevent the source of radiation from being put into operation.
7. The licensee or registrant shall control each area by use of administrative procedures and devices necessary to ensure that the area is cleared of personnel before each use of the source of radiation.
8. The licensee or registrant shall check each area by radiation measurement to ensure that, before the first individual's entry into the area after any use of the source of radiation, the radiation level from the source of radiation in the area will not expose an individual to a deep-dose equivalent in excess of 1 millisievert (0.1 rem) in one hour.
9. The licensee or registrant shall test the entry control devices required in subsection (B)(1) for proper functioning and keep records according to R12-1-421.
 - a. Testing shall be conducted before initial operation with the source of radiation on any day, unless operations were continued uninterrupted from the previous day;
 - b. Testing shall be conducted before resumption of operation of the source of radiation after any unintentional interruption;
 - c. The licensee or registrant shall submit to the Agency a schedule of testing; and
 - d. The licensee or registrant shall include in the schedule a listing of the periodic testing that will be followed.
10. The licensee or registrant shall not conduct operations, other than those necessary to place the source of radiation in a safe condition or effect repairs on controls, unless control devices are functioning properly.
11. The licensee or registrant shall control entry and exit portals that are used in transporting materials to and from the

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irradiation area, and that are not intended for use by personnel, with devices and administrative procedures necessary to physically protect and warn against inadvertent entry by an individual through one of the portals. Exit portals for irradiated materials shall be equipped to detect and signal the presence of any uncontained radioactive material that is carried toward an exit and automatically prevent contained radioactive material from being carried out of the area.

- C.** A licensee, registrant, or applicant seeking a license or registration for a source of radiation within the purview of subsection (B) that will be used in a variety of positions or in locations, such as open fields or forests, that make it impractical to comply with certain requirements of subsection (B) may apply to the Agency for approval of alternative safety measures. Alternative safety measures shall provide personnel protection at least equivalent to that specified in subsection (B). At least one of the alternative measures shall be an entry-preventing interlock control, based on a measurement of the radiation that ensures the absence of high radiation levels before an individual can gain access to the area where the sources of radiation are used.
- D.** A licensee or registrant shall provide the entry control devices required by subsections (B) and (C) in such a way that no individual will be prevented from leaving the area.
- E.** Records.
1. Each licensee or registrant shall maintain records of tests made according to subsection (B)(9) on entry control devices for very-high radiation areas. These records shall include the date and results of each test of function.
 2. The licensee or registrant shall retain the records for three years from the date the record is made.

Historical Note

Former Rule Section D.202; Former Section R12-1-422 repealed, new Section R12-1-422 adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-423. Use of Process or Other Engineering Controls

A licensee shall use, to the extent practicable, process or other engineering controls, such as containment, decontamination, or ventilation, to control the concentration of radioactive material in air.

Historical Note

Former Rule Section D.203. Former Section R12-1-423 repealed, new Section R12-1-423 adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-424. Use of Other Controls

- A.** If it is not practical to apply process or other engineering controls to control concentrations of radioactive material in the air to values below those that define an airborne radioactivity area, the licensee shall, consistent with maintaining the total effective dose equivalent according to R12-1-407(B), increase monitoring and limit intakes by one or more of the following means:
1. Control access,
 2. Limit exposure times,
 3. Use respiratory protection equipment, or

4. Use other controls.

- B.** If the licensee performs an ALARA analysis to determine whether or not respirators should be used, the licensee may consider safety factors other than radiological factors. The licensee shall also consider the impact of respirator use on workers' industrial health and safety.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-425. Use of Individual Respiratory Protection Equipment

- A.** If a licensee assigns or permits the use of respiratory protection equipment to limit the intake of radioactive material,
1. Except as provided in subsection (A)(2), the licensee shall use only respiratory protection equipment that is tested and certified by the National Institute for Occupational Safety and Health (NIOSH).
 2. If the licensee wishes to use equipment that has not been tested or certified by NIOSH, or for which there is no schedule for testing or certification, the licensee shall submit an application to the Agency and request authorization for use of this equipment, except as otherwise provided in this Section. The licensee shall provide evidence with the application that the material and performance characteristics of the equipment provide the asserted degree of protection under anticipated conditions of use. The licensee shall demonstrate the degree of protection by providing reliable test information.
 3. The licensee shall implement and maintain a respiratory protection program that includes:
 - a. Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate doses;
 - b. Surveys and bioassays, as necessary, to evaluate actual intakes;
 - c. Testing of respirators for operability (user seal check for face sealing devices and functional check for other devices) immediately before each use;
 - d. Written procedures regarding:
 - i. Monitoring, including air sampling and bioassays;
 - ii. Supervision and training of respirator users;
 - iii. Fit testing;
 - iv. Respirator selection;
 - v. Breathing air quality;
 - vi. Inventory and control;
 - vii. Storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment;
 - viii. Recordkeeping; and
 - ix. Limitations on periods of respirator use and relief from respirator use;
 - e. Determination by a physician that each individual user is able to use respiratory protection equipment:
 - i. Before the initial fitting of a face-sealing respirator;
 - ii. Before the first field use of a non-face-sealing respirator, and
 - iii. Every 12 months after initial fitting or first use, or periodically at a frequency determined by a physician.

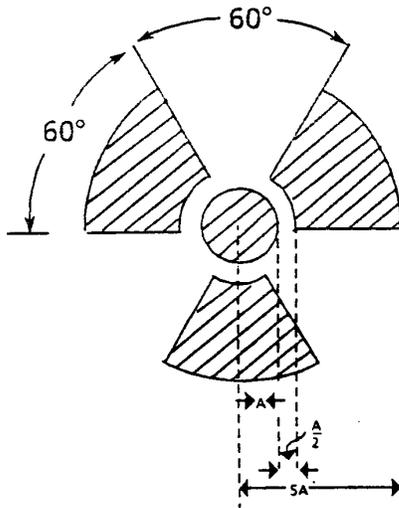
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- f. Fit testing, with a fit factor ≥ 10 times the APF for a negative pressure device and a fit factor ≥ 500 for any positive pressure, continuous flow, and pressure-demand device, before the first field use of tight-fitting, face-sealing respirators and periodically after first use at least yearly. The licensee shall perform fit testing with the face piece operating in the negative pressure mode.
4. The licensee shall advise each respirator user that the user may leave the area at any time for relief from respirator use, in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other condition that might require relief.
 5. The licensee shall consider manufacturer limitations regarding respirator type and mode of use. When selecting a respiratory device, the licensee shall provide for vision correction, adequate communication, low temperature work environments, and the concurrent use of other safety or radiological protection equipment. The licensee shall use equipment in a manner that does not interfere with the proper operation of the respirator.
 6. The licensee shall provide standby rescue persons whenever one-piece atmosphere-supplying suits, or any combination of supplied air respiratory protection device and personnel protective equipment are used from which an unaided individual would have difficulty extricating himself or herself. The licensee shall equip standby rescue persons with respiratory protection devices or other apparatus designed for potential hazards and anticipated conditions of use. The standby rescue persons shall observe or otherwise maintain continuous communication with the workers (visual, voice, signal line, telephone, radio, or other suitable means), and be immediately available to assist them in case of a failure of the air supply or for any other reason that requires relief from distress. The licensee shall provide at least one standby rescue person for every five workers, who is immediately available to assist any worker using this type of equipment and provide effective emergency rescue if needed.
 7. The licensee shall supply atmosphere-supplying respirators with respirable air of grade D quality or better as defined by the Compressed Gas Association in publication G-7.1, "Commodity Specification for Air," 1997 and included in the regulations of OSHA (29 CFR 1910.134(i)(1)(ii)(A) through (E), July 1, 2003, incorporated by reference and on file with the Agency, containing no future editions or amendments). Grade D quality air criteria include:
 - a. Oxygen content (v/v) of 19.5-23.5%;
 - b. Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
 - c. Carbon monoxide (CO) content of 10 ppm or less;
 - d. Carbon dioxide content of 1,000 ppm or less; and
 - e. Lack of noticeable odor.
 8. The licensee shall ensure that no objects, materials, or substances, such as facial hair, or any conditions that interfere with the face-to-face piece seal or valve function, and that are under the control of the respirator wearer, are present between the skin of the wearer's face and the sealing surface of a tight-fitting respirator face piece.
 9. In estimating the dose to individuals from intake of airborne radioactive materials, the licensee shall use the concentration of radioactive material in the air that is inhaled when respirators are worn, which is determined by dividing the ambient concentration in air without respiratory protection by the assigned protection factor. If the dose is later found to be greater than the estimated dose, the licensee shall modify the calculation using the corrected value. If the dose is later found to be less than the estimated dose, the licensee may modify the calculation using the corrected value.
- B. The licensee shall use Appendix A to select equipment and associated assigned protection factors.
 - C. A licensee shall apply to the Agency for authorization to use assigned protection factors in excess of those specified in Appendix A. To apply for authorization the licensee shall:
 1. State the reason for the higher protection factors; and
 2. Demonstrate that the requested respiratory protective equipment provides the higher protection factors under the proposed conditions of use.
 - D. The licensee shall notify the Agency in writing at least 30 days before the date that respiratory protective equipment is first used according to subsection (A) or (C).
- Historical Note**
Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).
- R12-1-426. Security of Stored Sources of Radiation**
A licensee or registrant shall secure from unauthorized removal or access licensed or registered sources of radiation that are stored in unrestricted areas.
- Historical Note**
Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
- R12-1-427. Control of Sources of Radiation Not in Storage**
- A. A licensee shall control and maintain constant surveillance of licensed radioactive material that is in an unrestricted area and is not in storage or in a patient.
 - B. A registrant shall maintain control of radiation machines that are in an unrestricted area and not in storage.
- Historical Note**
Adopted effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
- R12-1-428. Caution Signs**
- A. Unless otherwise authorized by the Agency, a licensee or registrant shall use the symbol prescribed by this Section with the colors magenta, or purple, or black on yellow background as the standard radiation symbol. The symbol prescribed is the three-bladed design as follows:

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 1. Cross-hatched area is to be magenta, purple, or black; and

2. The background is to be yellow.



- B.** Notwithstanding the requirements of subsection (A), licensees or registrants are authorized to label sources of radiation, source holders, or device components containing sources of radiation that are subjected to high temperatures, with conspicuously etched or stamped radiation caution symbols that lack the color scheme required in subsection A.
- C.** In addition to the contents of signs and labels prescribed in this Article, the licensee or registrant shall provide, on or near the required signs and labels, additional information to make individuals aware of potential radiation exposures and to minimize the exposures.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-428 repealed, new Section R12-1-428 adopted effective June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-429. Posting

- A.** A licensee or registrant shall post each radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA."
- B.** The licensee or registrant shall post each high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA."
- C.** The licensee or registrant shall post each very-high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "GRAVE DANGER, VERY HIGH RADIATION AREA."
- D.** The licensee shall post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."
- E.** The licensee shall post each area or room in which there is used or stored an amount of licensed material exceeding 10 times the quantity of licensed material specified in Appendix C with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)."

Historical Note

Former Section R12-1-429 repealed effective June 30, 1977 (Supp. 77-3). New Section 12-1-429 adopted effective

June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-430. Exceptions to Posting Requirements

- A.** A licensee or registrant is not required to post caution signs in areas or rooms containing sources of radiation for periods of less than eight hours, if each of the following conditions is met:
1. The sources of radiation are constantly attended during these periods by an individual who takes precautions necessary to prevent exposure of individuals to sources of radiation in excess of limits established in this Article; and
 2. The area or room is subject to the licensee's or registrant's control.
- B.** A licensee or registrant is not required to post a caution sign in a room or other area in a hospital that is occupied by an individual who has been administered radioactive material, if the individual meets the criteria for release in R12-1-719.
- C.** A licensee or registrant is not required to post a caution sign in a room or area because of the presence of a sealed source, provided the radiation level at 30 centimeters from the surface of the sealed source container or housing does not exceed 0.05 mSv (0.005 rem) per hour.
- D.** A hospital or clinic licensee is exempt from the posting requirements in R12-1-429 for a teletherapy room if:
1. Access to the room is controlled according to R12-1-731; and
 2. Personnel in attendance take necessary precautions to prevent the inadvertent exposure of workers, other patients, and members of the public to radiation that exceeds the limits established in this Chapter.
- E.** A registrant is not required to post a caution sign in a room or area because of the presence of radiation machines used solely for diagnosis in the healing arts.

Historical Note

Former Section R12-1-430 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-430 adopted effective June 26, 1987 (Supp. 87-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-431. Labeling Containers and Radiation Machines

- A.** A licensee shall ensure that each container of licensed material is labeled with a durable, clearly visible radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label shall also provide information, such as the radionuclides present, an estimate of the quantity of radioactivity, the date for which the radioactivity is estimated, radiation level, kind of material, and mass enrichment, to permit an individual handling or using a container, or working in the vicinity of a container, to take precautions to avoid or minimize exposure.
- B.** Before removal or disposal of an empty, uncontaminated container to an unrestricted area, each licensee shall remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.
- C.** Each registrant shall ensure that each radiation machine is labeled in a conspicuous manner to caution an individual that radiation is produced when it is energized.

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D. A licensee shall label each syringe and vial that contains a radiopharmaceutical used in the practice of medicine with the radiopharmaceutical content. Each syringe shield and vial shield shall be labeled, unless the label on the syringe or vial is visible when shielded. The label shall contain the radiopharmaceutical name or its abbreviation, the clinical procedure to be performed, or the name of the person being administered the radiopharmaceutical. Color-coding syringe shields and vial shields does not meet the labeling requirement.

Historical Note

Former Section R12-1-431 repealed effective June 30, 1977 (Supp. 77-3). New Section R12-1-431 adopted effective June 26, 1987 (Supp. 87-2). Amended effective November 5, 1993 (Supp. 93-4). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-432. Labeling Exemptions

A licensee is not required to label:

1. Containers holding licensed material in quantities less than the quantities listed in Appendix C;
2. Containers holding licensed material in concentrations less than those specified in Table III of Appendix B;
3. Containers attended by an individual who takes precautions necessary to prevent exposure of individuals to radiation in excess of the limits established in this Article;
4. Containers holding radioactive material that do not exceed the limits for excepted quantity or article as defined and limited in 49 CFR 173.403, and 173.421 through 173.424, and are transported, packaged, and labeled in accordance with 49 CFR 172.436 through 172.440 (Revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
5. Containers that are accessible only to individuals authorized to handle, use, or work in the vicinity of the containers, if the contents are identified to these individuals by a readily available written record, retained as long as the container is in use for the purpose indicated on the record. (Examples of containers of this type are containers in locations such as water-filled canals, storage vaults, or hot cells.); or
6. Installed manufacturing or process equipment, such as piping and tanks.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-433. Procedures for Receiving and Opening Packages

A. Each licensee who expects to receive a package containing quantities of radioactive material in excess of a Type A quantity, as defined in 10 CFR 71.4, January 1, 2005, which is incorporated by reference, published by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. The material incorporated by reference contains no future editions or amendments. The licensee shall make arrangements to receive:

1. The package when the carrier offers it for delivery; or

2. The notification of the arrival of the package at the carrier's terminal and to take possession of the package expeditiously.

B. Each licensee shall:

1. Monitor the external surfaces of a package, labeled with a Radioactive White I, Yellow II, or Yellow III as specified in 49 CFR 172.403 and 172.436 through 172.440, October 1, 2004, which are incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. The material incorporated by reference contains no future editions or amendments. The licensee shall test the package for radioactive contamination, unless the package contains only radioactive material in the form of gas or in special form, as defined in R12-1-102; and
2. Monitor the external surfaces of a package, labeled with a Radioactive White I, Yellow II, or Yellow III as specified in subsection (B)(1), for radiation levels unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, defined in 10 CFR 71, and referenced in subsection (A); and
3. Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if there is evidence of degradation of package integrity, such as packages that are crushed, wet, or damaged.

C. The licensee shall perform the monitoring required by subsection (B) as soon as practical after receipt of the package, but not later than three hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than three hours from the beginning of the next working day if it is received after working hours.

D. The licensee shall immediately notify the final delivery carrier and the Agency by telephone when:

1. Removable radioactive surface contamination exceeds 22 dpm/cm² for beta-gamma emitting radionuclides or 2.2 dpm/cm² for alpha-emitting radionuclides, wiping a minimum surface area of 300 square centimeters (46 square inches), or the entire surface if less than 300 square centimeters (46 square inches); or
2. External radiation levels exceed the limits of 2 millisieverts (200 millirem) per hour.

E. Each licensee shall:

1. Establish, maintain, and retain written procedures for safely opening packages that contain radioactive material, and
2. Ensure that the procedures are followed and that due consideration is given to special instructions for the type of package being opened.

F. Licensees transferring special form sources in vehicles owned or operated by the licensee to and from a work site are exempt from the contamination monitoring requirements of subsection (B) but are not exempt from the monitoring requirement in subsection (B) for measuring radiation levels that ensures that the source of radiation is still properly lodged in its shield.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-434. General Requirements for Waste Disposal

A. A licensee shall dispose of licensed material only:

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1. By transfer to an authorized recipient as provided in R12-1-439 or in Article 3 of these rules, or to the U.S. Department of Energy;
 2. By decay in storage, according to R12-1-438(C)
 3. By release in effluents within the limits in R12-1-416; or
 4. As authorized according to R12-1-435, R12-1-436, R12-1-437, R12-1-438, or R12-1-438.01;
- B.** To receive waste that contains licensed material from other persons, a person shall be specifically licensed for:
1. Treatment prior to disposal,
 2. Treatment or disposal by incineration,
 3. Decay in storage,
 4. Disposal at a land disposal facility licensed according to Article 3 of these rules, or
 5. Storage until transferred to a storage or disposal facility authorized to receive the waste.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-435. Method for Obtaining Approval of Proposed Disposal Procedures

For disposal of licensed material generated in the licensee's operations, a licensee or applicant for a license may apply to the Agency for approval of proposed disposal procedures, not otherwise authorized in this Chapter. Each application shall include:

1. A description of the waste containing licensed material to be disposed of, including the physical and chemical properties that have an impact on risk evaluation;
2. The proposed manner and conditions of waste disposal;
3. An analysis and evaluation of pertinent information on the nature of the environment;
4. The nature and location of other potentially affected facilities; and
5. An analysis and procedure to ensure that doses comply with R12-1-407(B), and are within the dose limits in this Article.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-436. Disposal by Release into Sanitary Sewerage System

- A.** A licensee may discharge licensed material into sanitary sewerage if each of the following conditions is satisfied:
1. The material is readily soluble or is readily dispersible biological material, in water;
 2. The quantity of licensed radioactive material that the licensee releases into the sewer in one month divided by the average monthly volume of water released into the sewer by the licensee or registrant does not exceed the concentration listed in Appendix B, Table III,
 3. If more than one radionuclide is released, the following conditions shall also be satisfied:
 - a. The licensee shall determine the fraction of the limit in Appendix B, Table III represented by discharges

into sanitary sewerage by dividing the actual monthly average concentration of each radionuclide released by the licensee or registrant into the sewer by the concentration of that radionuclide listed in Appendix B, Table III, and

- b. The sum of the fractions for each radionuclide required by subsection (A)(3)(a) does not exceed unity; and
 - c. The total quantity of licensed radioactive material that the licensee releases into the sanitary sewerage in a year does not exceed 185 GBq (5 Ci) of Hydrogen-3, 37 GBq (1 Ci) of Carbon-14, and 37 GBq (1 Ci) of all other radioactive materials combined.
- B.** Excreta from individuals undergoing medical diagnosis or therapy with radioactive material are not subject to the limitations contained in subsection (A).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-437. Treatment or Disposal by Incineration

A licensee shall treat or dispose of licensed material by incineration only in the amounts and forms specified in R12-1-438 or as specifically approved by the Agency according to R12-1-435.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-438. Disposal of Specific Wastes

- A.** A licensee may dispose of the following licensed material as if it were not radioactive:
1. 1.85 kBq (0.05 μ Ci), or less, of Hydrogen-3 or Carbon-14 per gram of medium used for liquid scintillation counting; and
 2. 1.85 kBq (0.05 μ Ci), or less, of Hydrogen-3 or Carbon-14 per gram of animal tissue, averaged over the weight of the entire animal.
 3. 1.85 kBq (0.05 μ Ci), or less, of Iodine-125 per gram of medium used in analyzing in vitro laboratory samples and associated sample holders contaminated during the laboratory procedure.
- B.** A licensee shall not dispose of tissue, contaminated with radioactive material, according to subsection (A)(2) in a manner that would permit its use either as food for humans or as animal feed.
- C.** A licensee may hold radioactive material with a physical half-life of less than or equal to 120 days for decay in storage before disposal without regard to its radioactivity, and is exempt from the requirements of R12-1-434, provided:
1. The licensee monitors the radioactive material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and
 2. The licensee removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee.
- D.** The licensee shall maintain records in accordance with R12-1-441.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended

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by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-438.01 Disposal of Certain Radioactive Material

- A.** Licensed material as defined in the definition of radioactive material in R12-1-102 may be disposed of in accordance with this Article, even though it is not defined as low-level radioactive waste. Therefore, any licensed radioactive material being disposed of at a facility, or transferred for ultimate disposal at a facility licensed by the Agency, must meet the requirements of R12-1-439.
- B.** A licensee may dispose of radioactive material, as defined in the definition of radioactive material in R12-1-102, at a disposal facility authorized to dispose of such material in accordance with any federal or state solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005.

Historical Note

Section R12-1-438.01 made by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-439. Transfer for Disposal and Manifests

- A.** Any licensee shipping radioactive waste intended for ultimate disposal at a licensed land disposal facility (for purposes of this rule "land disposal facility" means the land, buildings, structures, and equipment that are intended to be used for the disposal of radioactive waste. A geologic repository is not a land disposal facility) shall comply with 10 CFR 20.2006 and 10 CFR 20 Appendix G, published January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- B.** An authorized representative of the waste generator shall provide the certification required in 10 CFR 20, Appendix G, Section II, which is incorporated by reference under subsection (A).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-440. Compliance with Environmental and Health Protection Regulations

Nothing in R12-1-434, R12-1-435, R12-1-436, R12-1-437, R12-1-438, or R12-1-439 relieves the licensee from complying with other applicable federal, state, and local rules or regulations governing any other toxic or hazardous properties of materials that may be disposed of according to the rules listed in Article 4 of this Chapter.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-441. Records of Waste Disposal

- A.** Each licensee shall maintain records of the disposal of licensed materials made in accordance with R12-1-435, R12-1-436, R12-1-437, R12-1-438, and disposal by burial in soil, including burials authorized before February 25, 1985.
- B.** The licensee shall retain the records required by subsection (A) until the Agency terminates each pertinent license requiring the record. The licensee shall provide for the disposition of these records prior to license termination.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-442. Agency Inspection of Shipments of Waste

Each shipment of waste to a disposal facility, licensed under R12-1-1302(D)(11), is subject to inspection by the Agency before shipment or transportation. The waste shipper shall notify the Agency not less than five working days before the scheduled shipment or transportation of waste to a licensed disposal facility.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 5 A.A.R. 1812, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-443. Reports of Stolen, Lost, or Missing Licensed or Registered Sources of Radiation

- A.** Each licensee or registrant shall report to the Agency by telephone as follows:
1. Immediately after it becomes known to the licensee that licensed radioactive material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in Appendix C is stolen, lost, or missing under circumstances that indicate to the licensee that an exposure could result to individuals in unrestricted areas;
 2. Within 30 days after it becomes known to the licensee that licensed radioactive material in an aggregate quantity greater than 10 times the quantity specified in Appendix C is stolen, lost, or missing, and is still missing.
 3. Immediately after it becomes known to the registrant that a radiation machine is stolen, lost, or missing.
- B.** Each licensee or registrant required to make a report according to subsection (A) shall, within 30 days after making the telephone report, make a written report to the Agency that contains the following information:
1. A description of the licensed or registered source of radiation involved, including, for radioactive material, the kind, quantity, and chemical and physical form; and, for radiation machines, the manufacturer, model, serial number, type, and maximum energy of radiation emitted;
 2. A description of the circumstances under which the loss or theft occurred;
 3. A statement of disposition, or probable disposition, of the licensed or registered source of radiation;
 4. Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas;
 5. Actions that have been taken, or will be taken, to recover the source of radiation; and
 6. Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed or registered sources of radiation.
- C.** After filing the written report, the licensee or registrant shall also report additional substantive information on the loss or theft within 30 days after the licensee or registrant learns of the information.
- D.** The licensee or registrant shall provide the Agency with the names of individuals who may have received an exposure to radiation as a result of an incident reported to the Agency under subsection (B).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective

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June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-444. Reports of Exposures, Radiation Levels, and Concentrations of Radioactive Material Exceeding the Limits

- A.** In addition to the notification required by R12-1-445, each licensee or registrant shall submit a written report within 30 days after learning of any of the following:
1. Incidents for which notification is required by R12-1-445;
 2. Doses in excess of any of the following:
 - a. The occupational dose limits for adults in R12-1-408;
 - b. The occupational dose limits for a minor in R12-1-414;
 - c. The limits for an embryo or fetus of a declared pregnant woman in R12-1-415;
 - d. The limits for an individual member of the public in R12-1-416;
 - e. Any applicable limit in the license or registration; or
 - f. The ALARA limit on air emissions in R12-1-407;
 3. Levels of radiation or concentrations of radioactive material in:
 - a. A restricted area in excess of applicable limits in the license or registration, or
 - b. An unrestricted area in excess of 10 times the applicable limit in this Article or in the license or registration, whether or not this involves an exposure of any individual to a dose in excess of the limits in R12-1-416;
 4. Radiation levels or concentrations of radioactive material in excess of the standards in 40 CFR 190, 2003 edition, published July 1, 2003, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408 which is incorporated by reference and on file with the Agency, if the licensee is subject to these federal standards, or there is a license condition referencing the 40 CFR 190 standards. This incorporation by reference contains no future editions or amendments.
- B.** Contents of reports.
1. Each report shall contain a description of each individual's exposure to radiation and radioactive material, including as applicable:
 - a. Estimates of each individual's dose;
 - b. The levels of radiation and concentrations of radioactive material involved;
 - c. The cause of the elevated exposures, dose rates, or concentrations; and
 - d. Corrective steps taken or planned to ensure against a recurrence, including the schedule for achieving conformance with applicable limits, generally applicable environmental standards, and associated license or registration conditions.
 2. Each report filed according to subsection (A) shall include for each occupationally overexposed individual: name, Social Security number, and date of birth. With respect to the limit for an embryo or fetus in R12-1-415, the identifiers in the report should be those of the declared pregnant woman. The report shall be prepared so that information regarding each overexposed individual is stated in a separate and detachable part of the report.
- C.** All licensees or registrants who make reports according to subsection (A) shall submit the report in writing to the Agency.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-445. Notification of Incidents

- A.** Immediate notification: Each licensee or registrant shall immediately report to the Agency any event involving a radiation source that may have caused or threatens to cause any of the following conditions:
1. An individual to receive:
 - a. A total effective dose equivalent of 0.25 Sv (25 rem) or more;
 - b. A lens dose equivalent of 0.75 Sv (75 rem) or more; or
 - c. A shallow-dose equivalent to the skin or extremities of 2.5 Gy (250 rads) or more; or
 2. The release of radioactive material, inside or outside of a restricted area, so if an individual had been present for 24 hours, the individual could have received five times the annual limit on intake (this subsection do not apply to a location where personnel are not normally stationed during routine operations, such as a hot-cell or process enclosure).
- B.** Twenty-four hour notification: Each licensee or registrant shall, within 24 hours of discovery of the event, report to the Agency any event involving loss of control of a radiation source possessed by the licensee or registrant that may have caused, or threatens to cause, any of the following conditions:
1. An individual to receive, in a period of 24 hours
 - a. A total effective dose equivalent exceeding 0.05 Sv (5 rem);
 - b. A lens dose equivalent exceeding 0.15 Sv (15 rem); or
 - c. A shallow-dose equivalent to the skin or extremities exceeding 0.5 Gy (50 rads); or
 2. The release of radioactive material, inside or outside of a restricted area, so, if an individual had been present for 24 hours, the individual could have received an intake in excess of one occupational annual limit of intake (this subsection does not apply to a location where personnel are not normally stationed during routine operations, such as a hot-cell or process enclosure).
- C.** A licensee or registrant shall prepare any report filed with the Agency according to this Section so that names of individuals who have received exposure to radiation or radioactive material are stated in a separate and detachable part of the report.
- D.** A licensee or registrant shall report to the Agency by telephone in response to the requirements of this Section.
- E.** If the Agency does not respond to the initial telephone call, the licensee or registrant shall report to the Department of Public Safety and continue with reasonable efforts to contact the Agency Duty Officer until contact is made.
- F.** The provisions of this Section do not apply to a dose that results from a planned special exposure, if the dose is within the limits for planned special exposures and reported according to R12-1-413(C).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-446. Notifications and Reports to Individuals

- A.** Requirements for notification and reports to individuals of exposure to radiation or radioactive material are specified in R12-1-1004.
- B.** In addition to the reporting requirements in R12-1-444 and R12-1-445, each licensee or registrant shall notify the individual exposed to radiation or radioactive material. The notice to the exposed individual shall be provided no later than the date

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the report is submitted to the Agency and shall comply with R12-1-1004(A).

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).
Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).
Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-447. Vacating Premises

- A. If a facility has been used for activities involving radioactive material a licensee shall notify the Agency in writing of the intent to vacate the facility no less than 45 days before relinquishing possession or control of the facility.
- B. If a facility is contaminated with radioactive material, a licensee vacating the facility shall decontaminate it using Agency-approved procedures.
- C. The Agency shall inspect a vacated facility to determine whether it is contaminated with radioactive material.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).
Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-448. Additional Reporting

- A. Each licensee shall notify the Agency as soon as possible, but not later than four hours after the discovery of an event, and take immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed the limits specified in this Chapter or releases of licensed material that could exceed the limits specified in this Chapter. For purposes of this Section, event means a radiation accident involving a fire, explosion, gas release, or similar occurrence.
- B. Each licensee shall notify the Agency within 24 hours after discovering any of the following events involving licensed material:
 1. A contamination event that:
 - a. Requires that anyone having access to the contaminated area be restricted for more than 24 hours by the imposition of additional radiological controls to prohibit entry into the area; and
 - b. Involves a quantity of radioactive material greater than five times the lowest annual limit on intake specified in Appendix B of this Article; and
 - c. Results in access to the contaminated area being restricted for a reason other than to allow radionuclides with a half-life of less than 24 hours to decay prior to decontamination.
 2. An event in which equipment is disabled or fails to function as designed when:
 - a. The equipment is part of a system designed to prevent releases exceeding the limits specified in this Chapter, to prevent exposures to radiation and radioactive materials exceeding limits specified in this Chapter, or to mitigate the consequences of an accident; and
 - b. The equipment performs a safety function; and
 - c. No redundant equipment is available and operable to perform the required safety function.
 3. An event that requires urgent medical treatment of an individual with radioactive contamination on the individual's clothing or body.

4. A fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:
 - a. The quantity of material involved is greater than five times the lowest annual limit on intake specified in Appendix B of this Article, and
 - b. The damage affects the integrity of the licensed material or its container.
- C. Each licensee shall make reports required by subsections (A) and (B) above by telephone to the Agency. To the extent that the information is available at the time of notification, the information provided in these reports shall include:
 1. The callers's name and call back telephone number;
 2. A description of the event, including date and time;
 3. The exact location of the event;
 4. The isotopes, quantities, and chemical and physical form of the licensed material involved; and
 5. Any personnel radiation exposure data available.
- D. Each licensee who makes a report required by subsection (A) or (B) shall submit to the Agency a written follow-up report within 30 days of the initial report. Written reports prepared as required by other rules may be submitted to fulfill this requirement if the reports contain all of the required information in this subsection. The report shall include the following:
 1. A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;
 2. The exact location of the event;
 3. The isotopes, quantities, and chemical and physical form of the licensed material involved;
 4. Date and time of the event;
 5. Corrective actions taken or planned and the results of any evaluations or assessments; and
 6. The extent of personnel exposure to radiation or to radioactive materials without identification of each exposed individual by name.

Historical Note

Adopted effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-449. Survey Instruments and Pocket Dosimeters

- A. Each licensee or registrant shall ensure that survey instruments used to show compliance with this Article have been calibrated before first use, annually, and following repair, unless otherwise specified in this Chapter.
- B. To satisfy the requirements of subsection (A), the licensee or registrant shall:
 1. For each scale to be calibrated, calibrate two readings separated by at least 50 percent of scale rating; and
 2. Conspicuously note on the instrument the apparent radiation level, in appropriate units for the type of survey instrument being used and the date of calibration.
- C. Each licensee or registrant shall check each survey instrument for proper operation with the dedicated check source after calibration and before each use.
- D. The licensee or registrant shall retain a record of each calibration required in subsection (A) for three years. The record shall include:
 1. A description of the calibration procedure; and
 2. A description of the source used, the certified dose rates from the source, the rates indicated by the instrument being calibrated, the correction factors deduced from the calibration data, the signature of the individual who performed the calibration, and the date of calibration.

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- E.** To meet the requirements of subsections (A), (B), and (C), the licensee or registrant may obtain the services of persons licensed or registered by the Agency, the NRC, an Agreement State, or a Licensing State to perform calibrations of survey instruments. Licensing records of the service person authorization shall be maintained for three years by the licensee or registrant obtaining the service.
- F.** Each licensee or registrant shall ensure that pocket dosimeters used to show compliance with this Article:
1. Have been evaluated for proper operation annually and following repair, using a procedure acceptable to the Agency, unless a more frequent evaluation is required by license condition (Unless the dosimeter is electronic, the evaluation of the dosimeter shall include a drift test over a 24-hour period.); and
 2. Meet the performance criteria listed in R12-1-523(C) and R12-1-1130(C).
- G.** Records of personnel dosimeter operational checks shall be maintained for three years.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-450. Sealed Sources

- A.** A licensee shall only receive, possess, and use radioactive materials contained in a sealed source that has been manufactured, labeled, packaged, and distributed in accordance with a specific license for its manufacture and distribution. The license to manufacture and distribute a sealed source shall be issued by the Agency, U.S. Nuclear Regulatory Commission, a Licensing State, or another Agreement State.
- B.** A licensee who possesses and uses a sealed source, or any device or equipment that contains a sealed source, shall follow the radiation safety and handling instructions approved by the Agency or follow the radiation safety and handling instructions furnished by the manufacturer on the label attached to the source, on the permanent container of the source, or in a leaflet or brochure that accompanies the source, and maintain the instructions in a legible and conveniently available form. If the handling instructions, leaflet, or brochure is no longer available and a copy cannot be obtained from the manufacturer, the licensee shall notify the Agency that the source handling information is no longer available.
- C. Inventories:**
1. An inventory shall be conducted at intervals not to exceed six months, unless a shorter interval is specified by license condition.
 2. The records of the inventory shall be maintained for three years from the date of the inventory, and shall be available for inspection by the Agency.
 3. The information recorded shall include:
 - a. The kind and quantity of radioactive material,
 - b. The model and serial number of the source or the device in which it is mounted,
 - c. The location of the sealed source,
 - d. The date of the inventory, and
 - e. The signature of the person performing the inventory.
- D.** Any licensee who possesses and uses sealed sources in the practice of medicine shall conduct a physical inventory according to the requirements in 12 A.A.C. 1, Article 7.
- E.** Sealed sources, containing radioactive material, shall not be opened unless authorized by license condition.
- F.** Sealed sources and machines, devices, or equipment containing sealed sources shall be used in accordance with procedures described in the manufacturer's instructions and the safety precautions described in the Nuclear Regulatory Commission Sealed Sources and Device Registry, unless the instructions or precautions conflict with these rules or license condition.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-451. Termination of a Radioactive Material License or a Licensed Activity

- A.** As the final step before terminating a radioactive material use program licensed under R12-1-312, the licensee shall:
1. Certify to the Agency the disposition of all licensed material, including accumulated wastes, by submitting a complete description of a disposal plan with signed receipts from all licensed persons receiving the licensed material; and
 2. Conduct a radiation survey of the premises where the licensed activities were carried out to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-452 and submit to the Agency a report of the results of this survey, unless the licensee demonstrates in some other manner acceptable to the Agency that the premises are suitable for release in accordance with the criteria for decommissioning in R12-1-452.
- B.** Before terminating a licensed program, each licensee authorized to possess radioactive material with a half-life greater than 120 days, in any unsealed form, shall forward the following records to the Agency:
1. Records of disposal of the licensed material required by R12-1-435, R12-1-436, R12-1-437, and R12-1-438; and
 2. Records required by R12-1-418(D)(2)(d).
- C.** If a licensed activity is transferred or assigned in accordance with subsection (E), each licensee authorized to possess radioactive material with a half-life greater than 120 days, in any unsealed form, shall transfer the following records to the new licensee and the new licensee shall maintain these records until the license is terminated:
1. Records of disposal of licensed material required by R12-1-435, R12-1-436, R12-1-437, and R12-1-438; and
 2. Records required by R12-1-418(D)(2)(d).
- D.** Before the Agency terminates a license, each licensee shall forward the records required by subsection (E) to the Agency.
- E.** A person licensed under R12-1-312 shall maintain required records regarding decommissioning of a facility in a location identified on the license until the Agency releases the site for unrestricted use. Before transfer or assignment of licensed activities, a licensee shall transfer all records required by this Section to the transferee. If records relating to facility decommissioning are kept for other purposes, the transferee shall refer to these records and provide their location on the transferee's application for a license. The transferee shall maintain the records until the Agency terminates the transferee's new license. The new licensee shall maintain the following decommissioning records for Agency review:
1. Records of spills or other occurrences involving the spread of contamination in and around the facility, equipment, or site. The licensee shall maintain a record of any instance when contamination remains after cleanup procedures or there is a reasonable likelihood that a contami-

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nant has spread to an inaccessible area, as in the case of possible seepage into porous material such as concrete. These records shall include any known information that identifies any radionuclide involved and its quantity, form, and concentration.

2. As-built drawings showing modifications of structures and equipment in restricted areas where radioactive materials are used or stored, and locations of possible inaccessible contamination, such as buried pipes. If as-built drawings are referenced, the licensee need not index each relevant document individually. If drawings are not available, the licensee shall provide records with known information concerning these areas and locations, as prescribed in subsection (E)(1).
3. Except for areas that contain depleted uranium used only for shielding or as penetrators in unused munitions, a list, contained in a single document and updated every two years, of the following:
 - a. Any area designated or formerly designated as a restricted area as defined under R12-1-102;
 - b. Any area outside of a restricted area for which documentation is required under subsection (B)(1);
 - c. Any area outside of a restricted area where wastes have been buried;
 - d. Any area outside of a restricted area that contains regulated radioactive material that will require the licensee to either decontaminate the area for decommissioning under R12-1-452 or obtain disposal approval under R12-1-435; and
 - e. Any restricted area where wastes have been buried.
4. Records of the cost estimate performed for the decommissioning funding plan or the amount certified by the Agency for decommissioning and the method for assuring funding, if either a funding plan or certification is used.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-452. Radiological Criteria for License Termination**A. General provisions and scope:**

1. The criteria in this Section apply to the decommissioning of facilities licensed under Article 3 of this Chapter. The criteria do not apply to uranium and thorium recovery facilities already subject to 10 CFR 40, Appendix A, or to uranium solution extraction facilities.
2. The criteria in this Section do not apply to sites that:
 - a. Have been decommissioned before the effective date of this Section; or
 - b. Have previously submitted and received Agency approval of a license termination plan (LTP) or decommissioning plan.
3. If a site has been decommissioned and the license terminated in accordance with the criteria in this Section, the Agency shall not require additional cleanup unless, based on new information, the Agency determines that the criteria of this Section were not met and residual radioactivity at the site is a threat to public health and safety.
4. When calculating the TEDE for the average member of the critical group, a licensee shall use the peak annual dose expected within the first 1000 years after decommissioning.

B. Radiological criteria for unrestricted use. The Agency considers a site acceptable for unrestricted use if the licensee reduces residual radioactivity, distinguishable from background radiation, to a TEDE for an average member of the critical group

that does not exceed 0.15 mSv (15 mrem) per year, including radiation from groundwater sources of drinking water, and the residual radioactivity is as low as reasonably achievable (ALARA). To determine the level that is ALARA, the Agency and the licensee shall take into account any detriment, such as deaths from transportation accidents, that is likely to result from decontamination and waste disposal.

- C. Criteria for license termination under restrictive conditions.** The Agency considers a site acceptable for license termination if the licensee meets all of the following restrictive conditions:
1. The licensee demonstrates that a reduction in residual radioactivity, necessary to comply with subsection (B), will result in net public or environmental harm or is not being made because the residual level of radioactivity is ALARA. To determine the level that is ALARA, the Agency and the licensee shall take into account any detriment, such as deaths from transportation accidents, that is likely to result from decontamination and waste disposal;
 2. The licensee establishes one or more legally enforceable institutional controls that reduce residual radioactivity, distinguishable from background radiation, to a TEDE for the average member of the critical group that does not exceed (0.15 mSv) 15 mrem per year, including radiation from groundwater sources of drinking water;
 3. The licensee demonstrates financial assurance that complies with R12-1-323(C), which enables an independent third party, including a governmental custodian of the site, to assume and carry out responsibilities for control and maintenance of the site and funds placed into a trust segregated from the licensee's assets and outside the licensee's administrative control, and in which the adequacy of the trust funds is to be assessed based on an assumed annual 1 percent real rate of return on investment;
 4. The licensee submits a decommissioning plan or License Termination Plan (LTP) to the Agency, indicating the licensee's intent to decommission in accordance with R12-1-323 and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or decommissioning plan how comments from individuals and institutions in the community, who may be affected by the decommissioning, have been sought and addressed after analysis.
 - a. If a licensee is restricting use of the site, the licensee shall seek comments from the public concerning the proposed decommissioning, regarding all of the following matters:
 - i. Whether the institutional controls proposed by the licensee will reduce residual radioactivity, distinguishable from background radiation, to a TEDE for the average member of the critical group that does not exceed 0.15 mSv (15 mrem) per year; are enforceable; and do not impose an unreasonable burden on the local community or other affected parties; and
 - ii. Whether the licensee has provided financial assurance that complies with R12-1-323(C), which enables an independent third party, including a governmental custodian of the site, to assume and carry out responsibilities for control and maintenance of the site;
 - b. In seeking comments on the issues identified in subsection (C)(4)(a), the licensee shall provide for:
 - i. Participation by representatives of a broad cross section of community interests that may be affected by the decommissioning;

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- ii. An opportunity for a comprehensive discussion of the issues by all of the community representatives; and
 - iii. A publicly available document that contains or access to each oral and written comment that reflects the viewpoints of community representatives on each issue and the extent of agreement or disagreement among representatives on each issue; and
5. The licensee reduces residual radioactivity, distinguishable from background radiation, at the site so that if the institutional controls are no longer in effect, the TEDE for the average member of the critical group is as low as reasonably achievable and does not exceed 1 mSv (100 mrem) per year; unless the licensee:
- a. Demonstrates that a further reduction in residual radioactivity necessary to comply with subsection (C)(5) is not technically achievable or economically feasible, or will result in net public or environmental harm;
 - b. Provides for durable institutional controls; and
 - c. Provides financial assurance that complies with R12-1-323(C), which enables an independent third party, including a governmental custodian of the site, to carry out periodic rechecks of the site, no less frequently than every five years; assures that each institutional control remains in place according to subsection (C)(3); and assumes and carries out responsibilities for maintenance of the institutional control.
- D. Alternate criteria for license termination:**
- 1. Based on circumstances that relate to a specific license, the Agency may terminate the license using the following alternate criteria for subsections (B) or (C)(2), if the licensee demonstrates that the TEDE from residual radioactivity, distinguishable from background radiation, for an average member of the critical group does not exceed 0.15 mSv (15 mrem) per year, and if the licensee:
 - a. Ensures that public health and safety is protected by submitting an analysis of possible sources of exposure, prepared by an independent qualified expert, which indicates whether it is likely that the dose from all human-made sources combined, other than medical sources, is more than the 1 mSv/y (100 mrem/y) limit in R12-1-416;
 - b. Employs to the extent practicable, restrictions on site use, according to the provisions of subsection (C) to minimize exposures at the site;
 - c. Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal; and
 - d. Submits a decommissioning plan or License Termination Plan (LTP) to the Agency that indicates the licensee's intent to decommission in accordance with R12-1-323, and specifies that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan or LTP how comments from individuals and institutions in the community, who may be affected by the decommissioning, have been sought and addressed after analysis. In seeking comments, the licensee shall provide for:
 - i. Participation by representatives of a broad cross section of community interests that may be affected by the decommissioning;
 - ii. An opportunity for a comprehensive discussion of the issues by all of the community representatives; and
 - iii. A publicly available document that contains or access to each oral and written comment that reflects viewpoints of community representatives on each issue and the extent of agreement and disagreement among the representatives on each issue.
 - 2. The use of alternate criteria to terminate a license requires approval by the Agency after consideration of any comments provided by the U.S. Environmental Protection Agency and any public comments submitted under subsection (E).
- E. Public notification and public participation:**
- 1. Upon the receipt of an LTP or decommissioning plan from a licensee, or a proposal by a licensee for release of a site under subsection (C) or (D), or whenever the Agency determines that notice will serve the public interest, the Agency shall notify and solicit comments from:
 - a. Local and state governments in the vicinity of the site and any Indian Nation or other indigenous people that have treaty or statutory rights that could be affected by the decommissioning; and
 - b. The U.S. Environmental Protection Agency.
 - 2. To comply with subsection(E)(1) the Agency shall publish a notice in a local newspaper, send letters to state or local organizations on its mailing list, hold a public hearing that is readily accessible to individuals in the vicinity of the site, and solicit comments from the public.
- F. Minimization of contamination.** After the effective date of this Section, an applicant for a license, other than a renewal, shall describe in the application how facility design and procedures for operation will facilitate eventual decommissioning and minimize, to the extent practicable, the generation of radioactive waste and contamination of the facility and the environment.
- 1. Applicants for standard design certifications, standard design approvals, and manufacturing licenses shall describe in the application how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.
 - 2. Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in this Article and radiological criteria for license termination in this Article.
- G. The Agency considers a site acceptable for unrestricted use if the residual radioactivity, distinguishable from background radiation, is equal to or less than the values in Table 1.**

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

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Table 1. Acceptable Surface Contamination Levels

Radionuclide ¹	Average ^{2,3}	Maximum ^{2,4}	Removable ^{2,5}
U-nat, U-235, U-238, and associated decay products	5,000 dpm/100 cm ²	15,000 dpm/100cm ²	1,000 dpm/100 cm ²
Transuranics, Ra-226, Ra-228, Th-230, Pa-231, Ac-227, I-125, I-129	100dpm/100cm ²	300 dpm/100cm ²	20dpm/100cm ²
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100cm ²	3000 dpm/100cm ²	200 dpm/100cm ²
Beta-gamma (Exceptions noted above)	5,000 dpm/100 cm ²	15,000 dpm/100cm ²	1,000 dpm/100 cm ²

¹ Where surface contamination by both alpha-and beta-gamma-emitting radionuclides exists, the limits established for alpha-and beta-gamma-emitting radionuclides apply independently.

² As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed on an instrument calibrated for background, efficiency, and geometric factors associated with the instrumentation, in accordance with R12-1-449.

³ Measurements of average contamination level shall not be averaged over more than one square meter. For objects of less surface area, the average shall be derived for each object.

⁴ The maximum contamination level applies to an area of not more than 100 cm².

⁵ The amount of removable radioactive material per 100 cm² of surface area shall be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an instrument calibrated in accordance with R12-1-449. When removable contamination on objects of surface area A (where A is less than 100 sq. cm) is determined, the entire surface shall be wiped and the contamination level multiplied by 100/A to convert to a "per 100 sq. cm" basis.

Historical Note

Table 1 made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-453. Reports to Individuals of Exceeding Dose Limits

Any licensee or registrant that reports a personnel exposure to the Agency in accordance with R12-1-413(A)(6), R12-1-444, or R12-1-452 shall:

1. Notify the exposed individual of the exposure addressed in the report; and

2. Transmit the report to the exposed individual at the same time the Agency is notified of the exposure.

Historical Note

New Section made by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-454. Nationally Tracked Sources

- A. A licensee who manufactures, receives, transfers, disassembles, or disposes of a nationally tracked source shall complete and submit to the Nuclear Regulatory Commission's National Source Tracking System and the Agency, a National Source Tracking Transaction Report that contains the information required in 10 CFR 20.2207(a) through (e), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The report shall be submitted by the close of the next business day after the transaction using a reporting method specified in 10 CFR 20.2207(f), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- B. The initial National Source Tracking Transaction Report shall contain the information required in subsection (A), be submitted using a method specified in 10 CFR 20.2207(f) and include the additional information required by 10 CFR 20.2207(h)(1) through (6), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C. A licensee shall correct any error in previously filed National Source Tracking Transaction Reports or file a new report for any missed transaction within five business days of the discovery of the error or missed transaction in accordance with 10 CFR 20.2207(g), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- D. A licensee who receives a nationally tracked sealed source shall not disassemble the source unless specifically authorized to do so by the Agency.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-455. Security Requirements for Portable Gauges

- A. A licensee that uses a portable gauge shall use a minimum of two independent controls to maintain security while:
 1. Transporting a portable gauge; and
 2. Storing a portable gauge.
- B. Each control shall form a tangible barrier that will prevent unauthorized removal whenever a portable gauge is not under the control and constant surveillance of the licensee.
- C. A licensee shall employ controls approved by the Agency.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

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Appendix A. Assigned Protection Factors for Respirators^a

	Operating mode	Assigned Protection Factors
I. Air Purifying Respirators [Particulate ^b only] ^c :		
Filtering face piece disposable ^d	Negative	(^d)
Face piece, half ^e	Negative Pressure	10
Face piece, full	Negative Pressure	100
Face piece, half	Powered Air-purifying Respirators	50
Face piece, full	Powered Air-purifying Respirators	1000
Helmet/hood	Powered Air-purifying Respirators	1000
Face piece, loose-fitting	Powered Air-purifying Respirators	25
II. Atmosphere supplying respirators [particulate, gases and vapors ^f]:		
1. Air-line respirator:		
Face piece, half	Demand	10
Face piece, half	Continuous Flow	50
Face piece, half	Pressure Demand	50
Face piece, full	Demand	100
Face piece, full	Continuous Flow	1000
Face piece, full	Pressure Demand	1000
Helmet/hood	Continuous Flow	1000
Face piece, loose-fitting	Continuous Flow	25
Suit	Continuous Flow	(^g)
2. Self-contained breathing Apparatus (SCBA):		
Face piece, full	Demand	^h 100
Face piece, full	Pressure Demand	ⁱ 10,000
Face piece, full	Demand, Recirculating	^h 100
Face piece, full	Positive Pressure Recirculating	ⁱ 10,000
III. Combination Respirators:		
Any combination of air-purifying and atmosphere-supplying respirators	Assigned protection factor for type and mode of operation as listed above	

^a These assigned protection factors apply only in a respiratory protection program that meets the requirements of this Article. They are applicable only to airborne radiological hazards and may not be appropriate if chemical or other respiratory hazards exist instead of, or in addition to, radioactive hazards. A licensee shall comply with Department of Labor regulations, regarding selection and use of respirators for those circumstances.

Radioactive contaminants for which the concentration values in Table 1, Column 3 of Appendix B are based on internal dose due to inhalation may, in addition, present external exposure hazards at higher concentrations. Under these circumstances, limitations on occupancy may have to be governed by external dose limits.

^b A licensee shall equip air purifying respirators of APF<100 with particulate filters that are at least 95 percent efficient. The licensee shall equip air purifying respirators of APF=100 with particulate filters that are at least 99 percent efficient. The licensee shall equip air purifying respirators of APF>100 with particulate filters that are at least 99.97 percent efficient.

^c A licensee may apply to the Commission for the use of an APF greater than 1 for sorbent cartridges as protection against airborne radioactive gases and vapors, similar to radioiodine.

^d A Licensee may permit an individual to use this type of respirator if the individual has not been medically screened or fit tested on the device, provided that no credit is taken for use of these respirators in estimation of intake or dose. It is also recognized that it is difficult to perform an effective positive or negative pressure pre-use user seal check on this type of device. All other respiratory protection program requirements listed in 10 CFR 20.1703, January 2000 Edition, and published January 1, 2000, apply and are incorporated by reference and available for review at the Agency and Secretary of State. This incorporation by reference contains no future editions or amendments. There is no assigned protection factor for these devices. However, a licensee may use an APF equal to 10 if the licensee can demonstrate a fit factor of at least 100 by use of a validated or evaluated, qualitative or quantitative fit test.

^e Under-chin type only. No distinction is made in this appendix between elastomeric half-masks with replaceable cartridges and those designed with the filter medium as an integral part of the face piece (disposable or reusable disposable). Both types are acceptable as long as the seal area of the latter contains some substantial type of seal-enhancing material, such as rubber or plastic, two or more suspension straps are adjustable, the filter medium is at least 95 percent efficient, and all other requirements of this Article are met.

^f The assigned protection factors for gases and vapors are not applicable to radioactive contaminants that present an absorption or submersion hazard. For tritium oxide vapor, approximately one-third of the intake occurs by absorption through the skin so that an overall pro-

tection factor of 3 is appropriate when atmosphere-supplying respirators are used to protect against tritium oxide. Exposure to radioactive noble gases is not considered a significant respiratory hazard and protective actions for these contaminants should be based on external (submersion) dose considerations.

^g No NIOSH approval schedule is currently available for atmosphere supplying suits. This equipment may be used in an acceptable respiratory protection program as long as all the other minimum program requirements, with the exception of fit testing, are met. The minimum program requirements are provided in 10 CFR 20.1703.

^h The licensee shall implement institutional controls to assure that these devices are not used in areas immediately dangerous to life or health (IDLH).

ⁱ This type of respirator may be used as an emergency device in unknown concentrations for protection against inhalation hazards. External radiation hazards and other limitations to permitted exposure such as skin absorption shall be taken into account in these circumstances. This device may not be used by any individual who experiences perceptible outward leakage of breathing gas while wearing the device.

Historical Note

Former Appendix A repealed; new Appendix A adopted effective June 30, 1977 (Supp. 77-3). Section repealed; new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

Appendix B. Annual Limits on Intake (ALI) and Derived Air Concentrations (DAC) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sanitary Sewerage

Introduction

For each radionuclide, Table I indicates the chemical form which is to be used for selecting the appropriate ALI or DAC value. The ALIs and DACs for inhalation are given for an aerosol with an activity median aerodynamic diameter (AMAD) of 1 μm , micron, and for three classes (D,W,Y) of radioactive material, which refer to their retention (approximately days, weeks, or years) in the pulmonary region of the lung. This classification applies to a range of clearance half-times for D if less than 10 days, for W from 10 to 100 days, and for Y greater than 100 days. Table II provides concentration limits for airborne and liquid effluents released to the general environment. Table III provides concentration limits for discharges to sanitary sewerage.

Note:

The values in Tables I, II, and III are presented in the computer "E" notation. In this notation a value of 6E-02 represents a value of 6×10^{-2} or 0.06, 6E+2 represents 6×10^2 or 600, and 6E+0 represents 6×10^0 or 6.

Table I "Occupational Values"

Note that the columns in Table I of this Appendix captioned "Oral Ingestion ALI," "Inhalation ALI," and "DAC" are applicable to occupational exposure to radioactive material.

The ALIs in this Appendix are the annual intakes of given radionuclide by "Reference Man" which would result in either (1) a committed effective dose equivalent of 0.05 Sv (5 rem), stochastic ALI, or (2) a committed dose equivalent of 0.5 Sv (50 rem) to an organ or tissue, nonstochastic ALI. The stochastic ALIs were derived to result in a risk, due to irradiation of organs and tissues, comparable to the risk associated with deep-dose equivalent to the whole body of 0.05 Sv (5 rem). The derivation includes multiplying the committed dose equivalent to an organ or tissue by a weighting factor, W_T . This weighting factor is the proportion of the risk of stochastic effects resulting from irradiation of the organ or tissue, T, to the total risk of stochastic effects when the whole body is irradiated uniformly. The values of W_T are listed under the definition of weighting factor in R12-1-403. The nonstochastic ALIs were derived to avoid nonstochastic effects, such as prompt damage to tissue or reduction in organ function.

A value of $W_T = 0.06$ is applicable to each of the five organs or tissues in the "remainder" category receiving the highest dose equivalents, and the dose equivalents of all other remaining tissues may be disregarded. The following portions of the GI tract --

stomach, small intestine, upper large intestine, and lower large intestine -- are to be treated as four separate organs.

Note that the dose equivalents for an extremity, skin, and lens of the eye are not considered in computing the committed effective dose equivalent but are subject to limits that shall be met separately.

When an ALI is defined by the stochastic dose limit, this value alone is given. When an ALI is determined by the nonstochastic dose limit to an organ, the organ or tissue to which the limit applies is shown, and the ALI for the stochastic limit is shown in parentheses. Abbreviated organ or tissue designations are used:

LLI wall	=	lower large intestine wall,
St. wall	=	stomach wall,
Blad wall	=	bladder wall, and
Bone surf	=	Bone surface.

The use of the ALIs listed first, the more limiting of the stochastic and nonstochastic ALIs, will ensure that nonstochastic effects are avoided and that the risk of stochastic effects is limited to an acceptably low value. If, in a particular situation involving a radionuclide for which the nonstochastic ALI is limiting, use of that nonstochastic ALI is considered unduly conservative, the licensee may use the stochastic ALI to determine the committed effective dose equivalent. However, the licensee shall also ensure that the 0.5 Sv (50 rem) dose equivalent limit for any organ or tissue is not exceeded by the sum of the external deep-dose equivalent plus the internal committed dose equivalent to that organ, not the effective dose. For the case where there is no external dose contribution, this would be demonstrated if the sum of the fractions of the nonstochastic ALIs (ALI_{ns}) that contribute to the committed dose equivalent to the organ receiving the highest dose does not exceed unity, that is, $\sum (\text{intake (in } \mu\text{Ci) of each radionuclide} / ALI_{ns}) \leq 1.0$. If there is an external deep dose equivalent contribution of H_d , then this sum must be less than $1 - (H_d/50)$, instead of ≤ 1.0 .

Note that the dose equivalents for an extremity, skin, and lens of the eye are not considered in computing the committed effective dose equivalent but are subject to limits that must be met separately.

The derived air concentration (DAC) values are derived limits intended to control chronic occupational exposures. The relationship between the DAC and the ALI is given by:

$$DAC = ALI(\text{in } \mu\text{Ci}) / (2000 \text{ hours per working year} \times 60 \text{ minutes/hour} \times 2 \times 10^4 \text{ ml per minute}) = [ALI / 2.4 \times 10^9] \mu\text{Ci/ml},$$

where 2×10^4 ml is the volume of air breathed per minute at work by Reference Man under working conditions of light work.

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The DAC values relate to one of two modes of exposure: either external submersion or the internal committed dose equivalents resulting from inhalation of radioactive materials. DACs based upon submersion are for immersion in a semi-infinite cloud of uniform concentration and apply to each radionuclide separately.

The ALI and DAC values include contributions to exposure by the single radionuclide named and any in-growth of daughter radionuclides produced in the body by decay of the parent. However, intakes that include both the parent and daughter radionuclides shall be treated by the general method appropriate for mixtures.

The values of ALI and DAC do not apply directly when the individual both ingests and inhales a radionuclide, when the individual is exposed to a mixture of radionuclides by either inhalation or ingestion or both, or when the individual is exposed to both internal and external irradiation. See R12-1-407. When an individual is exposed to radioactive materials which fall under several of the translocation classifications of the same radionuclide, such as Class D, Class W, or Class Y, the exposure may be evaluated as if it were a mixture of different radionuclides.

It should be noted that the classification of a compound as Class D, W, or Y is based on the chemical form of the compound and does not take into account the radiological half-life of different radionuclides. For this reason, values are given for Class D, W, and Y compounds, even for very short-lived radionuclides.

Table II "Effluent Concentrations"

The columns in Table II of this Appendix captioned "Effluents," "Air," and "Water" are applicable to the assessment and control of dose to the public, particularly in the implementation of the provisions of R12-1-415. The concentration values given in Columns 1 and 2 of Table II are equivalent to the radionuclide concentrations which, if inhaled or ingested continuously over the course of a year, would produce a total effective dose equivalent of 0.5 mSv (0.05 rem).

Consideration of nonstochastic limits has not been included in deriving the air and water effluent concentration limits because nonstochastic effects are presumed not to occur at or below the dose levels established for individual members of the public. For radionuclides, where the nonstochastic limit was governing in deriving the occupational DAC, the stochastic ALI was used in deriving the corresponding airborne effluent limit in Table II. For this reason, the DAC and airborne effluent limits are not always proportional as they were in earlier versions of Appendix A of Article 4.

The air concentration values listed in Table II, Column 1 were derived by one of two methods. For those radionuclides for which the stochastic limit is governing, the occupational stochastic inhalation ALI was divided by 2.4×10^9 , relating the inhalation ALI to the DAC, as explained above, and then divided by a factor of 300. The factor of 300 includes the following components: a factor of 50 to relate the 0.05 Sv (5 rem) annual occupational dose limit to the 0.1 rem limit for members of the public, a factor of 3 to adjust for the difference in exposure time and the inhalation rate for a worker and that for members of the public; and a factor of 2 to adjust the occupational values, derived for adults, so that they are applicable to other age groups.

For those radionuclides for which submersion, that is external dose, is limiting, the occupational DAC in Table I, Column 3 was divided by 219. The factor of 219 is composed of a factor of 50, as described above, and a factor of 4.38 relating occupational exposure for 2,000 hours per year to full-time exposure (8,760 hours per year). Note that an additional factor of 2 for age considerations is not warranted in the submersion case.

The water concentrations were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^7 . The factor of 7.3×10^7 (ml) includes the following components: the factors of 50 and 2 described above and a factor of 7.3×10^5 (ml) which is the annual water intake of Reference Man.

Note 2 of this Appendix provides groupings of radionuclides which are applicable to unknown mixtures of radionuclides. These groupings, including occupational inhalation ALIs and DACs, air and water effluent concentrations, and releases to sewer, require demonstrating that the most limiting radionuclides in successive classes are absent. The limit for the unknown mixture is defined when the presence of one of the listed radionuclides cannot be definitely excluded as being present either from knowledge of the radionuclide composition of the source or from actual measurements.

Table III "Releases to Sewers"

The monthly average concentrations for release to sanitary sewerage are applicable to the provisions in R12-1-435. The concentration values were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^6 (ml). The factor of 7.3×10^6 (ml) is composed of a factor of 7.3×10^5 (ml), the annual water intake by Reference Man, and a factor of 10, such that the concentrations, if the sewage released by the licensee were the only source of water ingested by a Reference Man during a year, would result in a committed effective dose equivalent of 0.5 rem.

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LIST OF ELEMENTS

<u>Name</u>	<u>Symbol</u>	<u>Atomic Number</u>	<u>Name</u>	<u>Symbol</u>	<u>Atomic Number</u>
Actinium	Ac	89	Mendelevium	Md	101
Aluminum	Al	13	Mercury	Hg	80
Americium	Am	95	Molybdenum	Mo	42
Antimony	Sb	51	Neodymium	Nd	60
Argon	Ar	18	Neptunium	Np	93
Arsenic	As	33	Nickel	Ni	28
Astatine	At	85	Niobium	Nb	41
Barium	Ba	56	Nitrogen	N	7
Berkelium	Bk	97	Osmium	Os	76
Beryllium	Be	4	Oxygen	O	8
Bismuth	Bi	83	Palladium	Pd	46
Bromine	Br	35	Phosphorus	P	15
Cadmium	Cd	48	Platinum	Pt	78
Calcium	Ca	20	Plutonium	Pu	94
Californium	Cf	98	Polonium	Po	84
Carbon	C	6	Potassium	K	19
Cerium	Ce	58	Praseodymium	Pr	59
Cesium	Cs	55	Promethium	Pm	61
Chlorine	Cl	17	Protactinium	Pa	91
Chromium	Cr	24	Radium	Ra	88
Cobalt	Co	27	Radon	Rn	86
Copper	Cu	29	Rhenium	Re	75
Curium	Cm	96	Rhodium	Rh	45
Dysprosium	Dy	66	Rubidium	Rb	37
Einsteinium	Es	99	Ruthenium	Ru	44
Erbium	Er	68	Samarium	Sm	62
Europium	Eu	63	Scandium	Sc	21
Fermium	Fm	100	Selenium	Se	34
Fluorine	F	9	Silicon	Si	14
Francium	Fr	87	Silver	Ag	47
Gadolinium	Gd	64	Sodium	Na	11
Gallium	Ga	31	Strontium	Sr	38
Germanium	Ge	32	Sulfur	S	16
Gold	Au	79	Tantalum	Ta	73
Hafnium	Hf	72	Technetium	Tc	43
Holmium	Ho	67	Tellurium	Te	52
Hydrogen	H	1	Terbium	Tb	65
Indium	In	49	Thallium	Tl	81
Iodine	I	53	Thorium	Th	90
Iridium	Ir	77	Thulium	Tm	69
Iron	Fe	26	Tin	Sn	50
Krypton	Kr	36	Titanium	Ti	22
Lanthanum	La	57	Tungsten	W	74
Lead	Pb	82	Uranium	U	92
Lutetium	Lu	71	Vanadium	V	23
Magnesium	Mg	12	Xenon	Xe	54
Manganese	Mn	25	Ytterbium	Yb	70
			Yttrium	Y	39
			Zinc	Zn	30
			Zirconium	Zr	40

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col. 2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			1	Hydrogen-3	Water, DAC includes skin absorption Gas (HT or T ₂) Submersion ¹ : Use above values as HT and T ₂ oxidize in air and in the body to HTO.	8E+4	8E+4	2E-5
4	Beryllium-7	W, all compounds except those given for Y Y, oxides, halides, and nitrates	4E+4	2E+4	9E-6	3E-8	6E-4	6E-3
4	Beryllium-10	W, see ⁷ Be	1E+3	2E+2	6E-8	2E-10	-	--
		LLI wall	(1E+3)	-	-	-	2E-5	2E-4
		Y, see ⁷ Be	-	1E+1	6E-9	2E-11	-	-
6	Carbon-11 ²	Monoxide	-	1E+6	5E-4	2E-6	-	-
		Dioxide	-	6E+5	3E-4	9E-7	-	-
		Compounds	4E+5	4E+ 5	2E-4	6E-7	6E-3	6E-2
6	Carbon-14	Monoxide	-	2E+6	7E-4	2E-6	-	-
		Dioxide	-	2E+5	9E-5	3E-7	-	-
		Compounds	2E+3	2E+3	1E-6	3E-9	3E-5	3E-4
7	Nitrogen-13 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
8	Oxygen-15 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
9	Fluorine-18 ²	D, fluorides of H, Li, Na, K, Rb, Cs, and Fr	5E+4	7E+4	3E-5	1E-7	-	-
		St wall	(5E+4)	-	-	-	7E-4	7E-3
		W, fluorides of Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, As, Sb, Bi, Fe, Ru, Os, Co, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, V, Nb, Ta, Mn, Tc, and Re	-	9E+4	4E-5	1E-7	-	-
		Y, Lanthanum fluoride	-	8E+4	3E-5	1E-7	-	-
11	Sodium-22	D, all compounds	4E+2	6E+2	3E-7	9E-10	6E-6	6E-5
11	Sodium-24	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
12	Magnesium-28	D, all compounds except those given for W W, oxides, hydroxides, carbides, halides, and nitrates	7E+2	2E+3	7E-7	2E-9	9E-6	9E-5
13	Aluminum-26	D, all compounds except those given for W W, oxides, hydroxides, carbides, halides, and nitrates	4E+2	6E+1	3E-8	9E-11	6E-6	6E-5
14	Silicon-31	D, all compounds except those given for W and Y W, oxides, hydroxides, carbides, and nitrates Y, aluminosilicate glass	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
			-	3E+4	1E-5	5E-8	-	-
			-	3E+4	1E-5	4E-8	-	-
14	Silicon-32	D, see ³¹ Si LLI wall	2E+3	2E+2	1E-7	3E-10	-	-
			(3E+3)	-	-	-	4E-5	4E-4

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W, see ³¹ Si	-	1E+2	5E-8	2E-10	-	-
Y, see ³¹ Si	-	5E+0	2E-9	7E-12	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			15	Phosphorus-32	D, all compounds except phosphates given for W	6E+2	9E+2	4E-7
		W, phosphates of Zn ²⁺ , S ³⁺ , Mg ²⁺ , Fe ³⁺ , Bi ³⁺ , and Lanthanides	-	4E+2	2E-7	5E-10	-	-
15	Phosphorus-33	D, see ³² P	6E+3	8E+3	4E-6	1E-8	8E-5	8E-4
		W, see ³² P	-	3E+3	1E-6	4E-9	-	-
16	Sulfur-35	Vapor	1E+4	6E-6	2E-8	-	-	-
		D, sulfides and sulfates except those given for W	1E+4	2E+4	7E-6	2E-8	-	-
		LLI wall	(8E+3)	-	-	-	1E-4	1E-3
		W, elemental sulfur, sulfides of Sr, Ba, Ge, Sn, Pb, As, Sb, Bi, Cu, Ag, Au, Zn, Cd, Hg, W, and Mo. Sulfates of Ca, Sr, Ba, Ra, As, Sb, and Bi	-	2E+3	9E-7	3E-9	-	-
17	Chlorine-36	D, chlorides of H, Li, Na, K, Rb, Cs, and Fr	2E+3	2E+3	1E-6	3E-9	2E-5	2E-4
		W, chlorides of Lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, and Re	-	2E+2	1E-7	3E-10	-	-
17	Chlorine-38 ²	D, see ³⁶ Cl	2E+4	4E+4	2E-5	6E-8	-	-
		St wall	(3E+4)	-	-	-3E-4	3E-3	-
		W, see ³⁶ Cl	-	5E+4	2E-5	6E-8	-	-
17	Chlorine-39 ²	D, see ³⁶ Cl	2E+4	5E+4	2E-5	7E-8	-	-
		St wall	(4E+4)	-	-	-5E-4	5E-3	-
		W, see ³⁶ Cl	-	6E+4	2E-5	8E-8	-	-
18	Argon-37	Submersion ¹	-	-	1E+0	6E-3	-	-
18	Argon-39	Submersion ¹	-	-	2E-4	8E-7	-	-
18	Argon-41	Submersion ¹	-	-	3E-6	1E-8	-	-
19	Potassium-40	D, all compounds	3E+2	4E+2	2E-7	6E-10	4E-6	4E-5
19	Potassium-42	D, all compounds	5E+3	5E+3	2E-6	7E-9	6E-5	6E-4
19	Potassium-43	D, all compounds	6E+3	9E+3	4E-6	1E-8	9E-5	9E-4
19	Potassium-44 ²	D, all compounds	2E+4	7E+4	3E-5	9E-8	-	-
		St wall	(4E+4)	-	-	-	5E-4	5E-3
19	Potassium-45 ²	D, all compounds	3E+4	1E+5	5E-5	2E-7	-	-
		St wall	(5E+4)	-	-	-	7E-4	7E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation	Col.3 DAC	Col. 1 Air	Col. 2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
20	Calcium-41	W, all compounds	3E+3	4E+3	2E-6	-	-	-
			Bone surf (4E+3)	Bone surf (4E+3)	-	5E-9	6E-5	6E-4
20	Calcium-45	W, all compounds	2E+3	8E+2	4E-7	1E-9	2E-5	2E-4
20	Calcium-47	W, all compounds	8E+2	9E+2	4E-7	1E-9	1E-5	1E-4
21	Scandium-43	Y, all compounds	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
21	Scandium-44m	Y, all compounds	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
21	Scandium-44	Y, all compounds	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
21	Scandium-46	Y, all compounds	9E+2	2E+2	1E-7	3E-10	1E-5	1E-4
21	Scandium-47	Y, all compounds	2E+3	3E+3	1E-6	4E-9	-	-
			LLI wall (3E+3)	-	-	-	4E-5	4E-4
21	Scandium-48	Y, all compounds	8E+2	1E+3	6E-7	2E-9	1E-5	1E-4
21	Scandium-49 ²	Y, all compounds	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
22	Titanium-44	D, all compounds except those given for W and Y	3E+2	1E+1	5E-9	2E-11	4E-6	4E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	3E+1	1E-8	4E-11	-	-
		Y, SrTiO	-	6E+0	2E-9	8E-12	-	-
22	Titanium-45	D, see ⁴⁴ Ti	9E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see ⁴⁴ Ti	-	4E+4	1E-5	5E-8	-	-
		Y, see ⁴⁴ Ti	-	3E+4	1E-5	4E-8	-	-
23	Vanadium-47 ²	D, all compounds except those given for W	3E+4	8E+4	3E-5	1E-7	-	-
			St wall (3E+4)	-	-	-	4E-4	4E-3
		W, oxides, hydroxides, carbides, and halides	-	1E+5	4E-5	1E-7	-	-
23	Vanadium-48	D, see ⁴⁷ V	6E+2	1E+3	5E-7	2E-9	9E-6	9E-5
		W, see ⁴⁷ V	-	6E+2	3E-7	9E-10	-	-
23	Vanadium-49	D, see ⁴⁷ V	7E+4	3E+4	1E-5	-	-	-
			LLI wall (9E+4)	Bone surf (3E+4)	-	5E-8	1E-3	1E-2
		W, see ⁴⁷ V	-	2E+4	8E-6	2E-8	-	-
24	Chromium-48	D, all compounds except those given for W and Y	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, halides and nitrates	-	7E+3	3E-6	1E-8	-	-
		Y, oxides and hydroxides	-	7E+3	3E-6	1E-8	-	-
24	Chromium-49 ²	D, see ⁴⁸ Cr	3E+4	8E+4	4E-5	1E-7	4E-4	4E-3
		W, see ⁴⁸ Cr	-	1E+5	4E-5	1E-7	-	-
		Y, see ⁴⁸ Cr	-	9E+4	4E-5	1E-7	-	-
24	Chromium-51	D, see ⁴⁸ Cr	4E+4	5E+4	2E-5	6E-8	5E-4	5E-3
		W, see ⁴⁸ Cr	-	2E+4	1E-5	3E-8	-	-
		Y, see ⁴⁸ Cr	-	2E+4	8E-6	3E-8	-	-
25	Manganese-51 ²	D, all compounds except those given for W	2E+4	5E+4	2E-5	7E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	8E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation	Col.3 DAC	Col. 1 Air	Col.2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
25	Manganese-52m ²	D, see ⁵¹ Mn	3E+4 St wall (4E+4)	9E+4 -	4E-5 -	1E-7 -	- 5E-4	- 5E-3
		W, see ⁵¹ Mn	-	1E+5	4E-5	1E-7	-	-
25	Manganese-52	D, see ⁵¹ Mn	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
		W, see ⁵¹ Mn	-	9E+2	4E-7	1E-9	-	-
25	Manganese-53	D, see ⁵¹ Mn	5E+4	1E+4	5E-6	-	7E-4	7E-3
				Bone surf (2E+4)	-	3E-8	-	-
		W, see ⁵¹ Mn	-	1E+4	5E-6	2E-8	-	-
25	Manganese-54	D, see ⁵¹ Mn	2E+3	9E+2	4E-7	1E-9	3E-5	3E-4
		W, see ⁵¹ Mn	-	8E+2	3E-7	1E-9	-	-
25	Manganese-56	D, see ⁵¹ Mn	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁵¹ Mn	-	2E+4	9E-6	3E-8	-	-
26	Iron-52	D, all compounds except those given for W	9E+2	3E+3	1E-6	4E-9	1E-5	1E-4
		W, oxides, hydroxides, and halides	-	2E+3	1E-6	3E-9	-	-
26	Iron-55	D, see ⁵² Fe	9E+3	2E+3	8E-7	3E-9	1E-4	1E-3
		W, see ⁵² Fe	-	4E+3	2E-6	6E-9	-	-
26	Iron-59	D, see ⁵² Fe	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		W, see ⁵² Fe	-	5E+2	2E-7	7E-10	-	-
26	Iron-60	D, see ⁵² Fe	3E+1	6E+0	3E-9	9E-12	4E-7	4E-6
		W, see ⁵² Fe	-	2E+1	8E-9	3E-11	-	-
27	Cob9alt-55	W, all compounds except those given for Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
27	Cobalt-56	W, see ⁵⁵ Co	5E+2	3E+2	1E-7	4E-10	6E-6	6E-5
		Y, see ⁵⁵ Co	4E+2	2E+2	8E-8	3E-10	-	-
27	Cobalt-57	W, see ⁵⁵ Co	8E+3	3E+3	1E-6	4E-9	6E-5	6E-4
		Y, see ⁵⁵ Co	4E+3	7E+2	3E-7	9E-10	-	-
27	Cobalt-58m	W, see ⁵⁵ Co	6E+4	9E+4	4E-5	1E-7	8E-4	8E-3
		Y, see ⁵⁵ Co	-	6E+4	3E-5	9E-8	-	-
27	Cobalt-58	W, see ⁵⁵ Co	2E+3	1E+3	5E-7	2E-9	2E-5	2E-4
		Y, see ⁵⁵ Co	1E+3	7E+2	3E-7	1E-9	-	-
27	Cobalt-60m ²	W, see ⁵⁵ Co	1E+6 St wall (1E+6)	4E+6 -	2E-3 -	6E-6 -	- 2E-2	- 2E-1
		Y, see ⁵⁵ Co	-	3E+6	1E-3	4E-6	-	-
27	Cobalt-60	W, see ⁵⁵ Co	5E+2	2E+2	7E-8	2E-10	3E-6	3E-5
		Y, see ⁵⁵ Co	2E+2	3E+1	1E-8	5E-11	-	-
27	Cobalt-61 ²	W, see ⁵⁵ Co	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		Y, see ⁵⁵ Co	2E+4	6E+4	2E-5	8E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			27	Cobalt-62m ²	W, see ⁵⁵ Co St wall	4E+4 (5E+4)	2E+5 -	7E-5 -
28	Nickel-56	Y, see ⁵⁵ Co D, all compounds except those given for W W, oxides, hydroxides, and carbides Vapor	- 1E+3 -	2E+5 2E+3 1E+3	6E-5 8E-7 5E-7	2E-7 3E-9 2E-9	- 2E-5 -	- 2E-4 -
28	Nickel-57	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	2E+3 - -	5E+3 3E+3 6E+3	2E-6 1E-6 3E-6	7E-9 4E-9 9E-	2E-5 - -	2E-4 - -
28	Nickel-59	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	2E+4 - -	4E+3 7E+3 2E+3	2E-6 3E-6 8E-7	5E-9 1E-8 3E-9	3E-4 - -	3E-3 - -
28	Nickel-63	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	9E+3 - -	2E+3 3E+3 8E+2	7E-7 1E-6 3E-7	2E-9 4E-9 1E-9	1E-4 - -	1E-3 - -
28	Nickel-65	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	8E+3 - -	2E+4 3E+4 2E+4	1E-5 1E-5 7E-6	3E-8 4E-8 2E-8	1E-4 - -	1E-3 - -
28	Nickel-66	D, see ⁵⁶ Ni LLI wall W, see ⁵⁶ Ni Vapor	4E+2 (5E+2) - -	2E+3 - 6E+2 3E+3	7E-7 - 3E-7 1E-6	2E-9 - 9E-10 4E-9	- 6E-6 - -	- 6E-5 - -
29	Copper-60 ²	D, all compounds except those given for W and Y St wall W, sulfides, halides, and nitrates Y, oxides and hydroxides	3E+4 (3E+4) - -	9E+4 - 1E+5 1E+5	4E-5 - 5E-5 4E-5	1E-7 - 2E-7 1E-7	- 4E-4 - -	- 4E-3 - -
29	Copper-61	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 4E+4 4E+4	1E-5 2E-5 1E-5	4E-8 6E-8 5E-8	2E-4 - -	2E-3 - -
29	Copper-64	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 2E+4 2E+4	1E-5 1E-5 9E-6	4E-8 3E-8 3E-8	2E-4 - -	2E-3 - -
29	Copper-67	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	5E+3 - -	8E+3 5E+3 5E+3	3E-6 2E-6 2E-6	1E-8 7E-9 6E-9	6E-5 - -	6E-4 - -
30	Zinc-62	Y, all compounds	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
30	Zinc-63 ²	Y, all compounds St wall	2E+4 (3E+4)	7E+4 -	3E-5 -	9E-8 -	- 3E-4	- 3E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation	Col.3 DAC	Col. 1 Air	Col.2 Water	Monthly Average Concentration
			ALI (μCi)	ALI (μCi)	(μCi/ml)	(μCi/ml)	(μCi/ml)	
30	Zinc-65	Y, all compounds	4E+2	3E+2	1E-7	4E-10	5E-6	5E-5
30	Zinc-69m	Y, all compounds	4E+3	7E+3	3E-6	1E-8	6E-5	6E-4
30	Zinc-69 ²	Y, all compounds	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
30	Zinc-71m	Y, all compounds	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
30	Zinc-72	Y, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
31	Gallium-65 ²	D, all compounds except those given for W	5E+4 St wall (6E+4),	2E+5	7E-5	2E-7	- 9E-4	- 9E-3
		W, oxides, hydroxides, carbides, halides, and nitrates	-	2E+5	8E-5	3E-7	-	-
31	Gallium-66	D, see ⁶⁵ Ga	1E+3	4E+3	1E-6	5E-9	1E-5	1E-4
		W, see ⁶⁵ Ga	-	3E+3	1E-6	4E-9	-	-
31	Gallium-67	D, see ⁶⁵ Ga	7E+3	1E+4	6E-6	2E-8	1E-4	1E-3
		W, see ⁶⁵ Ga	-	1E+4	4E-6	1E-8	-	-
31	Gallium-68 ²	D, see ⁶⁵ Ga	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ⁶⁵ Ga	-	5E+4	2E-5	7E-8	-	-
31	Gallium-70 ²	D, see ⁶⁵ Ga	5E+4 St wall (7E+4)	2E+5	7E-5	2E-7	- 1E-3	- 1E-2
		W, see ⁶⁵ Ga	-	2E+5	8E-5	3E-7	-	-
31	Gallium-72	D, see ⁶⁵ Ga	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ⁶⁵ Ga	-	3E+3	1E-6	4E-9	-	-
31	Gallium-73	D, see ⁶⁵ Ga	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁶⁵ Ga	-	2E+4	6E-6	2E-8	-	-
32	Germanium-66	D, all compounds except those given for W	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
		W, oxides, sulfides, and halides	-	2E+4	8E-6	3E-8	-	-
32	Germanium-67 ²	D, see ⁶⁶ Ge	3E+4 St wait (4E+4)	9E+4	4E-5	1E-7	- 6E-4	- 6E-3
		W, see ⁶⁶ Ge	-	1E+5	4E-5	1E-7	-	-
32	Germanium-68	D, see ⁶⁶ Ge	5E+3	4E+3	2E-6	5E-9	6E-5	6E-4
		W, see ⁶⁶ Ge	-	1E+2	4E-8	1E-10	-	-
32	Germanium-69	D, see ⁶⁶ Ge	1E+4	2E+4	6E-6	2E-8	2E-4	2E-3
		W, see ⁶⁶ Ge	-	8E+3	3E-6	1E-8	-	-
32	Germanium-71	D, see ⁶⁶ Ge	5E+5	4E+5	2E-4	6E-7	7E-3	7E-2
		W, see ⁶⁶ Ge	-	4E+4	2E-5	6E-8	-	-
32	Germanium-75 ²	D, see ⁶⁶ Ge	4E+4 St wall (7E+4)	8E+4	3E-5	1E-7	- 9E-4	- 9E-3
		W, see ⁶⁶ Ge	-	8E+4	4E-5	1E-7	-	-
32	Germanium-77	D, see ⁶⁶ Ge	9E+3	1E+4	4E-6	1E-8	1E-4	1E-3
		W, see ⁶⁶ Ge	-	6E+3	2E-6	8E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
32	Germanium-78 ²	D, see ⁶⁶ Ge	2E+4 St wall (2E+4)	2E+4	9E-6	3E-8	-	-
		W, see ⁶⁶ Ge	-	2E+4	9E-6	3E-8	-	-
33	Arsenic-69 ²	W, all compounds	3E+4 St wall (4E+4)	1E+5	5E-5	2E-7	-	-
			-	-	-	-	6E-4	6E-3
33	Arsenic-70 ²	W, all compounds	1E+4	5E+4	2E-5	7E-8	2E-4	2E-3
33	Arsenic-71	W, all compounds	4E+3	5E+3	2E-6	6E-9	5E-5	5E-4
33	Arsenic-72	W, all compounds	9E+2	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-73	W, all compounds	8E+3	2E+3	7E-7	2E-9	1E-4	1E-3
33	Arsenic-74	W, all compounds	1E+3	8E+2	3E-7	1E-9	2E-5	2E-4
33	Arsenic-76	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-77	W, all compounds	4E+3	5E+3	2E-6	7E-9	-	-
			LLI wall (5E+3)	-	-	-	6E-5	6E-4
33	Arsenic-78 ²	W, all compounds	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
34	Selenium-70 ²	D, all compounds except those given for W	2E+4	4E+4	2E-5	5E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and elemental Se	1E+4	4E+4	2E-5	6E-8	-	-
34	Selenium-73m ²	D, see ⁷⁰ Se	6E+4	2E+5	6E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	6E-5	2E-7	-	-
34	Selenium-73	D, see ⁷⁰ Se	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
		W, see ⁷⁰ Se	-	2E+4	7E-6	2E-8	-	-
34	Selenium-75	D, see ⁷⁰ Se	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
		W, see ⁷⁰ Se	-	6E+2	3E-7	8E-10	-	-
34	Selenium-79	D, see ⁷⁰ Se	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
		W, see ⁷⁰ Se	-	6E+2	2E-7	8E-10	-	-
34	Selenium-81m ²	D, see ⁷⁰ Se	4E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		W, see ⁷⁰ Se	2E+4	7E+4	3E-5	1E-7	-	-
34	Selenium-81 ²	D, see ⁷⁰ Se	6E+4	2E+5	9E-5	3E-7	-	-
			St wall (8E+4)	-	-	-	1E-3	1E-2
		W, see ⁷⁰ Se	-	2E+5	1E-4	3E-7	-	-
34	Selenium-83 ²	D, see ⁷⁰ Se	4E+4	1E+5	5E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	5E-5	2E-7	-	-
35	Bromine-74m ²	D, bromides of H, Li, Na, K, Rb, Cs, and Fr	1E+4 St wall (2E+4)	4E+4	2E-5	5E-8	-	-
			-	-	-	-	3E-4	3E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air	Col. 2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
		W, Bromides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Mn, Tc, and Re	-	4E+4	2E-5	6E-8	-	-
35	Bromine-74 ²	D, see ^{74m} Br	2E+4	7E+4	3E-5	1E-7	-	-
		St wall	(4E+4)	-	-	-	5E-4	5E-3
		W, see ^{74m} Br	-	8E+4	4E-5	1E-7	-	-
35	Bromine-75 ²	D, see ^{74m} Br	3E+4	5E+4	2E-5	7E-8	-	-
		St wall	(4E+4)	-	-	-	5E-4	5E-3
		W, see ^{74m} Br	-	5E+4	2E-5	7E-8	-	-
35	Bromine-76	D, see ^{74m} Br	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
		W, see ^{74m} Br	-	4E+3	2E-6	6E-9	-	-
35	Bromine-77	D, see ^{74m} Br	2E+4	2E+4	1E-5	3E-8	2E-4	2E-3
		W, see ^{74m} Br	-	2E+4	8E-6	3E-8	-	-
35	Bromine-80m	D, see ^{74m} Br	2E+4	2E+4	7E-6	2E-8	3E-4	3E-3
		W, see ^{74m} Br	-	1E+4	6E-6	2E-8	-	-
35	Bromine-80 ²	D, see ^{74m} Br	5E+4	2E+5	8E-5	3E-7	-	-
		St wall	(9E+4)	-	-	-	1E-3	1E-2
		W, see ^{74m} Br	-	2E+5	9E-5	3E-7	-	-
35	Bromine-82	D, see ^{74m} Br	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see ^{74m} Br	-	4E+3	2E-6	5E-9	-	-
35	Bromine-83	D, see ^{74m} Br	5E+4	6E+4	3E-5	9E-8	-	-
		St wall	(7E+4)	-	-	-	9E-4	9E-3
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	-	-
35	Bromine-84 ²	D, see ^{74m} Br	2E+4	6E+4	2E-5	8E-8	-	-
		St wall	(3E+4)	-	-	-	4E-4	4E-3
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	-	-
36	Krypton-74 ²	Submersion ¹	-	-	3E-6	1E-8	-	-
36	Krypton-76	Submersion ¹	-	-	9E-6	4E-8	-	-
36	Krypton-77 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
36	Krypton-79	Submersion ¹	-	-	2E-5	7E-8	-	-
36	Krypton-81	Submersion ¹	-	-	7E-4	3E-6	-	-
36	Krypton-83m ²	Submersion ¹	-	-	1E-2	5E-5	-	-
36	Krypton-85m	Submersion ¹	-	-	2E-5	1E-7	-	-
36	Krypton-85	Submersion ¹	-	-	1E-4	7E-7	-	-
36	Krypton-87 ²	Submersion ¹	-	-	5E-6	2E-8	-	-
36	Krypton-88	Submersion ¹	-	-	2E-6	9E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
37	Rubidium-79 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	5E-5 -	2E-7 -	- 8E-4	- 8E-3
37	Rubidium-81m ²	D, all compounds	2E+5 St wall (3E+5)	3E+5 -	1E-4 -	5E-7 -	- 4E-3	- 4E-2
37	Rubidium-81	D, all compounds	4E+4	5E+4	2E-5	7E-8	5E-4	5E-3
37	Rubidium 82m	D, all compounds	1E+4	2E+4	7E-6	2E-8	2E-4	2E-3
37	Rubidium-83	D, all compounds	6E+2	1E+3	4E-7	1E-9	9E-6	9E-5
37	Rubidium-84	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-86	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-87	D, all compounds	1E+3	2E+3	6E-7	2E-9	1E-5	1E-4
37	Rubidium-88 ²	D, all compounds	2E+4 St wall (3E+4)	6E+4 -	3E-5 -	9E-8 -	- 4E-4	- 4E-3
37	Rubidium-89 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	6E-5 -	2E-7 -	- 9E-4	- 9E-3
38	Strontium-80 ²	D, all soluble compounds except SrTiO Y, all insoluble compounds and SrTiO	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
38	Strontium-81 ²	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	3E+4 2E+4	8E+4 8E+4	3E-5 3E-5	1E-7 1E-7	3E-4 -	3E-3 -
38	Strontium-82	D, see ⁸⁰ Sr LLI wall (2E+2) Y, see ⁸⁰ Sr	3E+2 2E+2	4E+2 9E+1	2E-7 4E-8	6E-10 1E-10	- -	- -
38	Strontium-83	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	3E+3 2E+3	7E+3 4E+3	3E-6 1E-6	1E-8 5E-9	3E-5 -	3E-4 -
38	Strontium-85m ²	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	2E+5 -	6E+5 8E+5	3E-4 4E-4	9E-7 1E-6	3E-3 -	3E-2 -
38	Strontium-85	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	3E+3 -	3E+3 2E+3	1E-6 6E-7	4E-9 2E-9	4E-5 -	4E-4 -
38	Strontium-87m	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	5E+4 4E+4	1E+5 2E+5	5E-5 6E-5	2E-7 2E-7	6E-4 -	6E-3 -
38	Strontium-89	D, see ⁸⁰ Sr LLI wall (6E+2) Y, see ⁸⁰ Sr	6E+2 5E+2	8E+2 1E+2	4E-7 6E-8	1E-9 2E-10	- -	- -
38	Strontium-90	D, see ⁸⁰ Sr Bone surf (4E+1) Y, see ⁸⁰ Sr	3E+1 -	2E+1 4E+0	8E-9 2E-9	- 6E-12	- -	- -
38	Strontium-91	D, see ⁸⁰ Sr Y, see ⁸⁰ Sr	2E+3 -	6E+3 4E+3	2E-6 1E-6	8E-9 5E-9	2E-5 -	2E-4 -

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			38	Strontium-92	D, see ^{80}Sr Y, see ^{80}Sr	3E+3 -	9E+3 7E+3	4E-6 3E-6
39	Yttrium-86m ²	W, all compounds except those given for Y Y, oxides and hydroxides	2E+4 -	6E+4 5E+4	2E-5 2E-5	8E-8 8E-8	3E-4 -	3E-3 -
39	Yttrium-86	W, see ^{86m}Y Y, see ^{86m}Y	1E+3 -	3E+3 3E+3	1E-6 1E-6	5E-9 5E-9	2E-5 -	2E-4 -
39	Yttrium-87	W, see ^{86m}Y Y, see ^{86m}Y	2E+3 -	3E+3 3E+3	1E-6 1E-6	5E-9 5E-9	3E-5 -	3E-4 -
39	Yttrium-88	W, see ^{86m}Y Y, see ^{86m}Y	1E+3 -	3E+2 2E+2	1E-7 1E-7	3E-10 3E-10	1E-5 -	1E-4 -
39	Yttrium-90m	W, see ^{86m}Y Y, see ^{86m}Y	8E+3 -	1E+4 1E+4	5E-6 5E-6	2E-8 2E-8	1E-4 -	1E-3 -
39	Yttrium-90	W, see ^{86m}Y	4E+2 LLI wall (5E+2)	7E+2 -	3E-7 -	9E-10 -	- 7E-6	- 7E-5
39	Yttrium-91m ²	W, see ^{86m}Y Y, see ^{86m}Y	1E+5 -	2E+5 2E+5	1E-4 7E-5	3E-7 2E-7	2E-3 -	2E-2 -
39	Yttrium-91	W, see ^{86m}Y	5E+2 LLI wall (6E+2)	2E+2 -	7E-8 -	2E-10 -	- 8E-6	- 8E-5
39	Yttrium-92	W, see ^{86m}Y Y, see ^{86m}Y	3E+3 -	9E+3 8E+3	4E-6 3E-6	1E-8 1E-8	4E-5 -	4E-4 -
39	Yttrium-93	W, see ^{86m}Y Y, see ^{86m}Y	1E+3 -	3E+3 2E+3	1E-6 1E-6	4E-9 3E-9	2E-5 -	2E-4 -
39	Yttrium-94 ²	W, see ^{86m}Y	2E+4 St wall (3E+4)	8E+4 -	3E-5 -	1E-7 -	- 4E-4	- 4E-3
39	Yttrium-95 ²	W, see ^{86m}Y	4E+4 St wall (5E+4)	2E+5 -	6E-5 -	2E-7 -	- 7E-4	- 7E-3
40	Zirconium-86	Y, see ^{86m}Y D, all compounds except those given for W and Y W, oxides, hydroxides, halides, and nitrates Y, carbide	1E+3 - -	4E+3 3E+3 2E+3	2E-6 1E-6 1E-6	6E-9 4E-9 3E-9	2E-5 - -	2E-4 - -
40	Zirconium-88	D, see ^{86}Zr W, see ^{86}Zr Y, see ^{86}Zr	4E+3 - -	2E+2 5E+2 3E+2	9E-8 2E-7 1E-7	3E-10 7E-10 4E-10	5E-5 - -	5E-4 - -

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			40	Zirconium-89	D, see ^{86}Zr	2E+3	4E+3	1E-6
		W, see ^{86}Zr	-	2E+3	1E-6	3E-9	-	-
		Y, see ^{86}Zr	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-93	D, see ^{86}Zr	1E+3	6E+0	3E-9	-	-	-
		Bone surf (3E+3)	Bone surf (2E+1)	-	2E-11	4E-5	4E-4	
		W, see ^{86}Zr	-	2E+1	1E-8	-	-	-
		Bone surf	(6E+1)	-	9E-11	-	-	
		Y, see ^{86}Zr	-	6E+1	2E-8	-	-	-
		Bone surf	(7E+1)	-	9E-11	-	-	
40	Zirconium-95	D, see ^{86}Zr	1E+3	1E+2	5E-8	-	2E-5	2E-4
		Bone surf	(3E+2)	-	4E-10	-	-	
		W, see ^{86}Zr	-	4E+2	2E-7	5E-10	-	-
		Y, see ^{86}Zr	-	3E+2	1E-7	4E-10	-	-
40	Zirconium-97	D, see ^{86}Zr	6E+2	2E+3	8E-7	3E-9	9E-6	9E-5
		W, see ^{86}Zr	-	1E+3	6E-7	2E-9	-	-
		Y, see ^{86}Zr	-	1E+3	5E-7	2E-9	-	-
41	Niobium-88 ²	W, all compounds except those given for Y	5E+4	2E+5	9E-5	3E-7	-	-
		St wall (7E+4)	-	-	-	-	1E-3	1E-2
		Y, oxides and hydroxides	-	2E+5	9E-5	3E-7	-	-
41	Niobium-89 ² (66 min)	W, see ^{88}Nb	1E+4	4E+4	2E-5	6E-8	1E-4	1E-3
		Y, see ^{88}Nb	-	4E+4	2E-5	5E-8	-	-
41	Niobium-89 (122 min)	W, see ^{88}Nb	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ^{88}Nb	-	2E+4	6E-6	2E-8	-	-
41	Niobium-90	W, see ^{88}Nb	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		Y, see ^{88}Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-93m	W, see ^{88}Nb	9E+3	2E+3	8E-7	3E-9	-	-
		LLI wall (1E+4)	-	-	-	-	2E-4	2E-3
		Y, see ^{88}Nb	-	2E+2	7E-8	2E-10	-	-
41	Niobium-94	W, see ^{88}Nb	9E+2	2E+2	8E-8	3E-10	1E-5	1E-4
		Y, see ^{88}Nb	-	2E+1	6E-9	2E-11	-	-
41	Niobium-95m	W, see ^{88}Nb	2E+3	3E+3	1E-6	4E-9	-	-
		LLI wall (2E+3)	-	-	-	-	3E-5	3E-4
		Y, see ^{88}Nb	-	2E+3	9E-7	3E-9	-	-
41	Niobium-95	W, see ^{88}Nb	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		Y, see ^{88}Nb	-	1E+3	5E-7	2E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			41	Niobium-96	W, see ⁸⁸ Nb	1E+3	3E+3	1E-6
		Y, see ⁸⁸ Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-97 ²	W, see ⁸⁸ Nb	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see ⁸⁸ Nb	-	7E+4	3E-5	1E-7	-	-
41	Niobium-98 ²	W, see ⁸⁸ Nb	1E+4	5E+4	2E-5	8E-8	2E-4	2E-3
		Y, see ⁸⁸ Nb	-	5E+4	2E-5	7E-8	-	-
42	Molybdenum-90	D, all compounds except those given for Y	4E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, oxides, hydroxides, and MoS	2E+3	5E+3	2E-6	6E-9	-	-
42	Molybdenum-93m	D, see ⁹⁰ Mo	9E+3	2E+4	7E-6	2E-8	6E-5	6E-4
		Y, see ⁹⁰ Mo	4E+3	1E+4	6E-6	2E-8	-	-
42	Molybdenum-93	D, see ⁹⁰ Mo	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		Y, see ⁹⁰ Mo	2E+4	2E+2	8E-8	2E-10	-	-
42	Molybdenum-99	D, see ⁹⁰ Mo	2E+3	3E+3	1E-6	4E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ⁹⁰ Mo	1E+3	1E+3	6E-7	2E-9	-	-
42	Molybdenum-101 ²	D, see ⁹⁰ Mo	4E+4	1E+5	6E-5	2E-7	-	-
		St wall (5E+4)	-	-	-	-	7E-4	7E-3
		Y, see ⁹⁰ Mo	-	1E+5	6E-5	2E-7	-	-
43	Technetium-93m ²	D, All compounds except those given for W	7E+4	2E+5	6E-5	2E-7	1E-3	1E-2
		W, oxides, hydroxides, halides, and nitrates	-	3E+5	1E-4	4E-7	-	-
43	Technetium-93	D, see ^{93m} Tc	3E+4	7E+4	3E-5	1E-7	4E-4	4E-3
		W, see ^{93m} Tc	-	1E+5	4E-5	1E-7	-	-
43	Technetium-94m ²	D, see ^{93m} Tc	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, see ^{93m} Tc	-	6E+4	2E-5	8E-8	-	-
43	Technetium-94	D, see ^{93m} Tc	9E+3	2E+4	8E-6	3E-8	1E-4	1E-3
		W, see ^{93m} Tc	-	2E+4	1E-5	3E-8	-	-
43	Technetium-95m	D, see ^{93m} Tc	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		W, see ^{93m} Tc	-	2E+3	8E-7	3E-9	-	-
43	Technetium-95	D, see ^{93m} Tc	1E+4	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ^{93m} Tc	-	2E+4	8E-6	3E-8	-	-
43	Technetium-96m ²	D, see ^{93m} Tc	2E+5	3E+5	1E-4	4E-7	2E-3	2E-2
		W, see ^{93m} Tc	-	2E+5	1E-4	3E-7	-	-
43	Technetium-96	D, see ^{93m} Tc	2E+3	3E+3	1E-6	5E-9	3E-5	3E-4
		W, see ^{93m} Tc	-	2E+3	9E-7	3E-9	-	-
43	Technetium-97m	D, see ^{93m} Tc	5E+3	7E+3	3E-6	-	6E-5	6E-4
		St wall (7E+3)	-	-	-	1E-8	-	-
		W, see ^{93m} Tc	-	1E+3	5E-7	2E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			43	Technetium-97	D, see ^{93m}Tc	4E+4	5E+4	2E-5
		W, see ^{93m}Tc	-	6E+3	2E-6	8E-9	-	-
43	Technetium-98	D, see ^{93m}Tc	1E+3	2E+3	7E-7	2E-9	1E-5	1E-4
		W, see ^{93m}Tc	-	3E+2	1E-7	4E-10	-	-
43	Technetium-99m	D, see ^{93m}Tc	8E+4	2E+5	6E-5	2E-7	1E-3	1E-2
		W, see ^{93m}Tc	-	2E+5	1E-4	3E-7	-	-
43	Technetium-99	D, see ^{93m}Tc	4E+3	5E+3	2E-6	-	6E-5	6E-4
				St wall				
			-	(6E+3)	-	8E-9	-	-
		W, see ^{93m}Tc	-	7E+2	3E-7	9E-10	-	-
43	Technetium-101 ²	D, see ^{93m}Tc	9E+4	3E+5	1E-4	5E-7	-	-
				St wall				
			(1E+5)	-	-	-	2E-3	2E-2
		W, see ^{93m}Tc	-	4E+5	2E-4	5E-7	-	-
43	Technetium-104 ²	D, see ^{93m}Tc	2E+4	7E+4	3E-5	1E-7	-	-
				St wall				
			(3E+4)	-	-	-	4E-4	4E-3
		W, see ^{93m}Tc	-	9E+4	4E-5	1E-7	-	-
44	Ruthenium-94 ²	D, all compounds except those given for W and Y	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, halides	-	6E+4	3E-5	9E-8	-	-
		Y, oxides and hydroxides	-	6E+4	2E-5	8E-8	-	-
44	Ruthenium-97	D, see ^{94}Ru	8E+3	2E+4	8E-6	3E-8	1E-4	1E-3
		W, see ^{94}Ru	-	1E+4	5E-6	2E-8	-	-
		Y, see ^{94}Ru	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-103	D, see ^{94}Ru	2E+3	2E+3	7E-7	2E-9	3E-5	3E-4
		W, see ^{94}Ru	-	1E+3	4E-7	1E-9	-	-
		Y, see ^{94}Ru	-	6E+2	3E-7	9E-10	-	-
44	Ruthenium-105	D, see ^{94}Ru	5E+3	1E+4	6E-6	2E-8	7E-5	7E-4
		W, see ^{94}Ru	-	1E+4	6E-6	2E-8	-	-
		Y, see ^{94}Ru	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-106	D, see ^{94}Ru	2E+2	9E+1	4E-8	1E-10	-	-
				LLI wall				
			(2E+2)	-	-	-	3E-6	3E-5
		W, see ^{94}Ru	-	5E+1	2E-8	8E-11	-	-
		Y, see ^{94}Ru	-	1E+1	5E-9	2E-11	-	-
45	Rhodium-99m	D, all compounds except those given for W and Y	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		W, halides	-	8E+4	3E-5	1E-7	-	-
		Y, oxides and hydroxides	-	7E+4	3E-5	9E-8	-	-
45	Rhodium-99	D, see ^{99m}Rh	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ^{99m}Rh	-	2E+3	9E-7	3E-9	-	-
		Y, see ^{99m}Rh	-	2E+3	8E-7	3E-9	-	-

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			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			45	Rhodium-100	D, see ^{99m}Rh	2E+3	5E+3	2E-6
		W, see ^{99m}Rh	-	4E+3	2E-6	6E-9	-	-
		Y, see ^{99m}Rh	-	4E+ 3	2E-6	5E-9	-	-
45	Rhodium-101m	D, see ^{99m}Rh	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see ^{99m}Rh	-	8E+3	4E-6	1E-8	-	-
		Y, see ^{99m}Rh	-	8E+3	3E-6	1E-8	-	-
45	Rhodium-101	D, see ^{99m}Rh	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see ^{99m}Rh	-	8E+2	3E-7	1E-9	-	-
		Y, see ^{99m}Rh	-	2E+2	6E-8	2E-10	-	-
45	Rhodium-102m	D, see ^{99m}Rh	1E+3	5E+2	2E-7	7E-10	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		W, see ^{99m}Rh	-	4E+2	2E-7	5E-10	-	-
		Y, see ^{99m}Rh	-	1E+2	5E-8	2E-10	-	-
45	Rhodium-102	D, see ^{99m}Rh	6E+2	9E+1	4E-8	1E-10	8E-6	8E-5
		W, see ^{99m}Rh	-	2E+2	7E-8	2E-10	-	-
		Y, see ^{99m}Rh	-	6E+1	2E-8	8E-11	-	-
45	Rhodium-103m ²	D, see ^{99m}Rh	4E+5	1E+6	5E-4	2E-6	6E-3	6E-2
		W, see ^{99m}Rh	-	1E+6	5E-4	2E-6	-	-
		Y, see ^{99m}Rh	-	1E+6	5E-4	2E-6	-	-
45	Rhodium-105	D, see ^{99m}Rh	4E+3	1E+4	5E-6	2E-8	-	-
		LLI wall (4E+3)	-	-	-	-	5E-5	5E-4
		W, see ^{99m}Rh	-	6E+3	3E-6	9E-9	-	-
		Y, see ^{99m}Rh	-	6E+3	2E-6	8E-9	-	-
45	Rhodium-106m	D, see ^{99m}Rh	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, see ^{99m}Rh	-	4E+4	2E-5	5E-8	-	-
		Y, see ^{99m}Rh	-	4E+4	1E-5	5E-8	-	-
45	Rhodium-107 ²	D, see ^{99m}Rh	7E+4	2E+5	1E-4	3E-7	-	-
		St wall (9E+4)	-	-	-	-	1E-3	1E-2
		W, see ^{99m}Rh	-	3E+5	1E-4	4E-7	-	-
		Y, see ^{99m}Rh	-	3E+5	1E-4	3E-7	-	-
46	Palladium-100	D, all compounds except those given for W and Y	1E+3	1E+3	6E-7	2E-9	2E-5	2E-4
		W, nitrates	-	1E+3	5E-7	2E-9	-	-
		Y, oxides and hydroxides	-	1E+3	6E-7	2E-9	-	-
46	Palladium-101	D, see ^{100}Pd	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ^{100}Pd	-	3E+4	1E-5	5E-8	-	-
		Y, see ^{100}Pd	-	3E+4	1E-5	4E-8	-	-

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			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
46	Palladium-103	D, see ¹⁰⁰ Pd	6E+3	6E+3	3E-6	9E-9	-	-
		LLI wall	(7E+3)	-	-	-	1E-4	1E-3
		W, see ¹⁰⁰ Pd	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁰⁰ Pd	-	4E+3	1E-6	5E-9	-	-
46	Palladium-107	D, see ¹⁰⁰ Pd	3E+4	2E+4	9E-6	-	-	-
		LLI wall	(4E+4)	Kidneys (2E+4)	-	3E-8	5E-4	5E-3
		W, see ¹⁰⁰ Pd	-	7E+3	3E-6	1E-8	-	-
		Y, see ¹⁰⁰ Pd	-	4E+2	2E-7	6E-10	-	-
46	Palladium-109	D, see ¹⁰⁰ Pd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		W, see ¹⁰⁰ Pd	-	5E+3	2E-6	8E-9	-	-
		Y, see ¹⁰⁰ Pd	-	5E+3	2E-6	6E-9	-	-
47	Silver-102 ²	D, all compounds except those given for W and Y	5E+4	2E+5	8E-5	2E-7	-	-
		St wall	(6E+4)	-	-	-	9E-4	9E-3
		W, nitrates and sulfides	-	2E+5	9E-5	3E-7	-	-
		Y, oxides and hydroxides	-	2E+5	8E-5	3E-7	-	-
47	Silver-103 ²	D, see ¹⁰² Ag	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104m ²	D, see ¹⁰² Ag	3E+4	9E+4	4E-5	1E-7	4E-4	4E-3
		W, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104 ²	D, see ¹⁰² Ag	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
		W, see ¹⁰² Ag	-	1E+5	6E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	6E-5	2E-7	-	-
47	Silver-105	D, see ¹⁰² Ag	3E+3	1E+3	4E-7	1E-9	4E-5	4E-4
		W, see ¹⁰² Ag	-	2E+3	7E-7	2E-9	-	-
		Y, see ¹⁰² Ag	-	2E+3	7E-7	2E-9	-	-
47	Silver-106m	D, see ¹⁰² Ag	8E+2	7E+2	3E-7	1E-9	1E-5	1E-4
		W, see ¹⁰² Ag	-	9E+2	4E-7	1E-9	-	-
		Y, see ¹⁰² Ag	-	9E+2	4E-7	1E-9	-	-
47	Silver-106 ²	D, see ¹⁰² Ag	6E+4	2E+5	8E-5	3E-7	-	-
		St Wall	(6E+4)	-	-	-	9E-4	9E-3
		W, see ¹⁰² Ag	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁰² Ag	-	2E+5	8E-5	3E-7	-	-
47	Silver-108m	D, see ¹⁰² Ag	6E+2	2E+2	8E-8	3E-10	9E-6	9E-5
		W, see ¹⁰² Ag	-	3E+2	1E-7	4E-10	-	-
		Y, see ¹⁰² Ag	-	2E+1	1E-8	3E-11	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			47	Silver-110m	D, see ^{102}Ag W, see ^{102}Ag Y, see ^{102}Ag	5E+2 - -	1E+2 2E+2 9E+1	5E-8 8E-8 4E-8
47	Silver-111	D, see ^{102}Ag LLI wall (1E+3) Liver (2E+3) W, see ^{102}Ag Y, see ^{102}Ag	9E+2 - -	2E+3 9E+2 9E+2	6E-7 - 4E-7	- 2E-9 1E-9	- 2E-5 -	- 2E-4 -
47	Silver-112	D, see ^{102}Ag W, see ^{102}Ag Y, see ^{102}Ag	3E+3 - -	8E+3 1E+4 9E+3	3E-6 4E-6 4E-6	1E-8 1E-8 1E-8	4E-5 - -	4E-4 - -
47	Silver-115 ²	D, see ^{102}Ag St wall (3E+4) W, see ^{102}Ag Y, see ^{102}Ag	3E+4 - -	9E+4 - 9E+4	4E-5 - 4E-5	1E-7 - 1E-7	- 4E-4 -	- 4E-3 -
48	Cadmium-104 ²	D, all compounds except those given for W and Y W, sulfides, halides, and nitrates Y, oxides and hydroxides	2E+4 - -	7E+4 1E+5 1E+5	3E-5 5E-5 5E-5	9E-8 2E-7 2E-7	3E-4 - -	3E-3 - -
48	Cadmium-107	D, see ^{104}Cd W, see ^{104}Cd Y, see ^{104}Cd	2E+4 - -	5E+4 6E+4 5E+4	2E-5 2E-5 2E-5	8E-8 8E-8 7E-8	3E-4 - -	3E-3 - -
48	Cadmium-109	D, see ^{104}Cd Kidneys (4E+2) W, see ^{104}Cd Kidneys (1E+2) Y, see ^{104}Cd	3E+2 - -	4E+1 1E+2 1E+2	1E-8 5E-8 5E-8	- 7E-11 2E-10	- 6E-6 -	- 6E-5 -
48	Cadmium-113m	D, see ^{104}Cd Kidneys (4E+1) W, see ^{104}Cd Kidneys (1E+1) Y, see ^{104}Cd	2E+1 - -	2E+0 8E+0 1E+1	1E-9 4E-9 5E-9	- 5E-12 2E-11	- 5E-7 -	- 5E-6 -
48	Cadmium-113	D, see ^{104}Cd Kidneys (3E+1) W, see ^{104}Cd Kidneys (1E+1) Y, see ^{104}Cd	2E+1 - -	2E+0 8E+0 1E+1	9E-10 3E-9 6E-9	- 5E-12 2E-11	- 4E-7 -	- 4E-6 -

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			48	Cadmium-115m	D, see ^{104}Cd	3E+2	5E+1 Kidneys	2E-8
			-	(8E+1)	-	1E-10	-	-
		W, see ^{104}Cd	-	1E+2	5E-8	2E-10	-	-
		Y, see ^{104}Cd	-	1E+2	6E-8	2E-10	-	-
48	Cadmium-115	D, see ^{104}Cd	9E+2	1E+3	6E-7	2E-9	-	-
			LLI wall (1E+3)	-	-	-	1E-5	1E-4
		W, see ^{104}Cd	-	1E+3	5E-7	2E-9	-	-
		Y, see ^{104}Cd	-	1E+3	6E-7	2E-9	-	-
48	Cadmium-117m	D, see ^{104}Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ^{104}Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ^{104}Cd	-	1E+4	6E-6	2E-8	-	-
48	Cadmium-117	D, see ^{104}Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ^{104}Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ^{104}Cd	-	1E+4	6E-6	2E-8	-	-
49	Indium-109	D, all compounds except those given for W	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	9E-8	-	-
49	Indium-110 ² (69.1 min)	D, see ^{109}In	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ^{109}In	-	6E+4	2E-5	8E-8	-	-
49	Indium-110 (4.9 h)	D, see ^{109}In	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		W, see ^{109}In	-	2E+4	8E-6	3E-8	-	-
49	Indium-111	D, see ^{109}In	4E+3	6E+3	3E-6	9E-9	6E-5	6E-4
		W, see ^{109}In	-	6E+3	3E-6	9E-9	-	-
49	Indium-112 ²	D, see ^{109}In	2E+5	6E+5	3E-4	9E-7	2E-3	2E-2
		W, see ^{109}In	-	7E+5	3E-4	1E-6	-	-
49	Indium-113m ²	D, see ^{109}In	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		W, see ^{109}In	-	2E+5	8E-5	3E-7	-	-
49	Indium-114m	D, see ^{109}In	3E+2	6E+1	3E-8	9E-11	-	-
			LLI wall (4E+2)	-	-	-	5E-6	5E-5
		W, see ^{109}In	-	1E+2	4E-8	1E-10	-	-
49	Indium-115m	D, see ^{109}In	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ^{109}In	-	5E+4	2E-5	7E-8	-	-
49	Indium-115	D, see ^{109}In	4E+1	1E+0	6E-10	2E-12	5E-7	5E-6
		W, see ^{109}In	-	5E+0	2E-9	8E-12	-	-
49	Indium-116m ²	D, see ^{109}In	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		W, see ^{109}In	-	1E+5	5E-5	2E-7	-	-
49	Indium-117m ²	D, see ^{109}In	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ^{109}In	-	4E+4	2E-5	6E-8	-	-
49	Indium-117 ²	D, see ^{109}In	6E+4	2E+5	7E-5	2E-7	8E-4	8E-3
		W, see ^{109}In	-	2E+5	9E-5	3E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air	Col. 2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
49	Indium-119m ²	D, see ¹⁰⁹ In	4E+4 St wall (5E+4)	1E+5	5E-5	2E-7	-	-
		W, see ¹⁰⁹ In	-	1E+5	6E-5	2E-7	-	-
50	Tin-110	D, all compounds except those given for W W, sulfides, oxides, hydroxides, halides, nitrates, and stannic phosphate	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
50	Tin-111 ²	D, see ¹¹⁰ Sn	7E+4	2E+5	9E-5	3E-7	1E-3	1E-2
		W, see ¹¹⁰ Sn	-	3E+5	1E-4	4E-7	-	-
50	Tin-113	D, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3)	1E+3	5E-7	2E-9	-	-
		W, see ¹¹⁰ Sn	-	5E+2	2E-7	8E-10	-	-
50	Tin-117m	D, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3)	1E+3 Bone surf (2E+3)	5E-7	-	-	-
		W, see ¹¹⁰ Sn	-	1E+3	6E-7	2E-9	-	-
50	Tin-119m	D, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3)	2E+3	1E-6	3E-9	-	-
		W, see ¹¹⁰ Sn	-	1E+3	4E-7	1E-9	-	-
50	Tin-121m	D, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3)	9E+2	4E-7	1E-9	-	-
		W, see ¹¹⁰ Sn	-	5E+2	2E-7	8E-10	-	-
50	Tin-121	D, see ¹¹⁰ Sn	6E+3 LLI wall (6E+3)	2E+4	6E-6	2E-8	-	-
		W, see ¹¹⁰ Sn	-	1E+4	5E-6	2E-8	-	-
50	Tin-123m ²	D, see ¹¹⁰ Sn	5E+4	1E+5	5E-5	2E-7	7E-4	7E-3
		W, see ¹¹⁰ Sn	-	1E+5	6E-5	2E-7	-	-
50	Tin-123	D, see ¹¹⁰ Sn	5E+2 LLI wall (6E+2)	6E+2	3E-7	9E-10	-	-
		W, see ¹¹⁰ Sn	-	2E+2	7E-8	2E-10	-	-
50	Tin-125	D, see ¹¹⁰ Sn	4E+2 LLI wall (5E+2)	9E+2	4E-7	1E-9	-	-
		W, see ¹¹⁰ Sn	-	4E+2	1E-7	5E-10	-	-
50	Tin-126	D, see ¹¹⁰ Sn	3E+2	6E+1	2E-8	8E-11	4E-6	4E-5
		W, see ¹¹⁰ Sn	-	7E+1	3E-8	9E-11	-	-
50	Tin-127	D, see ¹¹⁰ Sn	7E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		W, see ¹¹⁰ Sn	-	2E+4	8E-6	3E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col.2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			50	Tin-128 ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	9E+3 -	3E+4 4E+4	1E-5 1E-5
51	Antimony-115 ²	D, all compounds except those given for W W, oxides, hydroxides, halides, sulfides, sulfates, and nitrates	8E+4 -	2E+5 3E+5	1E-4 1E-4	3E-7 4E-7	1E-3 -	1E-2 -
51	Antimony-116m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 -	7E+4 1E+5	3E-5 6E-5	1E-7 2E-7	3E-4 -	3E-3 -
51	Antimony-116 ²	D, see ¹¹⁵ Sb St wall (9E+4) W, see ¹¹⁵ Sb	7E+4 - -	3E+5 -	1E-4 -	4E-7 -	- 1E-3 -	- 1E-2 -
51	Antimony-117	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	7E+4 -	2E+5 3E+5	9E-5 1E-4	3E-7 4E-7	9E-4 -	9E-3 -
51	Antimony-118m	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+3 5E+3	2E+4 2E+4	8E-6 9E-6	3E-8 3E-8	7E-5 -	7E-4 -
51	Antimony-119	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 2E+4	5E+4 3E+4	2E-5 1E-5	6E-8 4E-8	2E-4 -	2E-3 -
51	Antimony-120 ² (16 min)	D, see ¹¹⁵ Sb St wall (2E+5) W, see ¹¹⁵ Sb	1E+5 - -	4E+5 -	2E-4 -	6E-7 -	- 2E-3 -	- 2E-2 -
51	Antimony-120 (5.76 d)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+3 9E+2	2E+3 1E+3	9E-7 5E-7	3E-9 2E-9	1E-5 -	1E-4 -
51	Antimony-122	D, see ¹¹⁵ Sb LLI wall (8E+2) W, see ¹¹⁵ Sb	8E+2 - 7E+2	2E+3 -	1E-6 -	3E-9 -	- 1E-5 -	- 1E-4 -
51	Antimony-124m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	3E+5 2E+5	8E+5 6E+5	4E-4 2E-4	1E-6 8E-7	3E-3 -	3E-2 -
51	Antimony-124	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	9E+2 2E+2	4E-7 1E-7	1E-9 3E-10	7E-6 -	7E-5 -
51	Antimony-125	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+3 -	2E+3 5E+2	1E-6 2E-7	3E-9 7E-10	3E-5 -	3E-4 -
51	Antimony-126m ²	D, see ¹¹⁵ Sb St wall (7E+4) W, see ¹¹⁵ Sb	5E+4 - -	2E+5 -	8E-5 -	3E-7 -	- 9E-4 -	- 9E-3 -
51	Antimony-126	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	1E+3 5E+2	5E-7 2E-7	2E-9 7E-10	7E-6 -	7E-5 -
51	Antimony-127	D, see ¹¹⁵ Sb LLI wall (8E+2) W, see ¹¹⁵ Sb	8E+2 - 7E+2	2E+3 -	9E-7 -	3E-9 -	- 1E-5 -	- 1E-4 -

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
51	Antimony-128 ² (10.4 min)	D, see ¹¹⁵ Sb	8E+4 St wall (1E+5)	4E+5 -	2E-4 -	5E-7 -	- 1E-3	- 1E-2
		W, see ¹¹⁵ Sb	-	4E+5	2E-4	6E-7	-	-
51	Antimony-128 (9.01 h)	D, see ¹¹⁵ Sb	1E+3	4E+3	2E-6	6E-9	2E-5	2E-4
		W, see ¹¹⁵ Sb	-	3E+3	1E-6	5E-9	-	-
51	Antimony-129	D, see ¹¹⁵ Sb	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, see ¹¹⁵ Sb	-	9E+3	4E-6	1E-8	-	-
51	Antimony-130 ²	D, see ¹¹⁵ Sb	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		W, see ¹¹⁵ Sb	-	8E+4	3E-5	1E-7	-	-
51	Antimony-131 ²	D, see ¹¹⁵ Sb	1E+4 Thyroid (2E+4)	2E+4 Thyroid (4E+4)	1E-5 -	- 6E-8	- 2E-4	- 2E-3
		W, see ¹¹⁵ Sb	- -	2E+4 Thyroid (4E+4)	1E-5 -	- 6E-8	- -	- -
52	Tellurium-116	D, all compounds except those given for W	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, oxides, hydroxides, and nitrates	-	3E+4	1E-5	4E-8	-	-
52	Tellurium-121m	D, see ¹¹⁶ Te	5E+2 Bone surf (7E+2)	2E+2 Bone surf (4E+2)	8E-8 -	- 5E-10	- 1E-5	- 1E-4
		W, see ¹¹⁶ Te	-	4E+2	2E-7	6E-10	-	-
52	Tellurium-121	D, see ¹¹⁶ Te	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see ¹¹⁶ Te	-	3E+3	1E-6	4E-9	-	-
52	Tellurium-123m	D, see ¹¹⁶ Te	6E+2 Bone surf (1E+3)	2E+2 Bone surf (5E+2)	9E-8 -	- 8E-10	- 1E-5	- 1E-4
		W, see ¹¹⁶ Te	-	5E+2	2E-7	8E-10	-	-
52	Tellurium-123	D, see ¹¹⁶ Te	5E+2 Bone surf (1E+3)	2E+2 Bone surf (5E+2)	8E-8 -	- 7E-10	- 2E-5	- 2E-4
		W, see ¹¹⁶ Te	-	4E+2 Bone surf (1E+3)	2E-7 -	- 2E-9	- -	- -
52	Tellurium-125m	D, see ¹¹⁶ Te	1E+3 Bone surf (1E+3)	4E+2 Bone surf (1E+3)	2E-7 -	- 1E-9	- 2E-5	- 2E-4
		W, see ¹¹⁶ Te	-	7E+2	3E-7	1E-9	-	-
52	Tellurium-127m	D, see ¹¹⁶ Te	6E+2 -	3E+2 Bone surf (4E+2)	1E-7 -	- 6E-10	9E-6 -	9E-5 -
		W, see ¹¹⁶ Te	-	3E+2	1E-7	4E-10	-	-
52	Tellurium-127	D, see ¹¹⁶ Te	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ¹¹⁶ Te	-	2E+4	7E-6	2E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			52	Tellurium-129m	D, see ^{116}Te	5E+2	6E+2	3E-7
		W, see ^{116}Te	-	2E+2	1E-7	3E-10	-	-
52	Tellurium-129 ²	D, see ^{116}Te	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see ^{116}Te	-	7E+4	3E-5	1E-7	-	-
52	Tellurium-131m	D, see ^{116}Te	3E+2	4E+2	2E-7	-	-	-
		Thyroid	(6E+2)	Thyroid (1E+3)	-	2E-9	8E-6	8E-5
		W, see ^{116}Te	-	4E+2	2E-7	-	-	-
			-	Thyroid (9E+2)	-	1E-9	-	-
52	Tellurium-131 ²	D, see ^{116}Te	3E+3	5E+3	2E-6	-	-	-
		Thyroid	(6E+3)	Thyroid (1E+4)	-	2E-8	8E-5	8E-4
		W, see ^{116}Te	-	5E+3	2E-6	-	-	-
			-	Thyroid (1E+4)	-	2E-8	-	-
52	Tellurium-132	D, see ^{116}Te	2E+2	2E+2	9E-8	-	-	-
		Thyroid	(7E+2)	Thyroid (8E+2)	-	1E-9	9E-6	9E-5
		W, see ^{116}Te	-	2E+2	9E-8	-	-	-
			-	Thyroid (6E+2)	-	9E-10	-	-
52	Tellurium-133m ²	D, see ^{116}Te	3E+3	5E+3	2E-6	-	-	-
		Thyroid	(6E+3)	Thyroid (1E+4)	-	2E-8	9E-5	9E-4
		W, see ^{116}Te	-	5E+3	2E-6	-	-	-
			-	Thyroid (1E+4)	-	2E-8	-	-
52	Tellurium-133 ²	D, see ^{116}Te	1E+4	2E+4	9E-6	-	-	-
		Thyroid	(3E+4)	Thyroid (6E+4)	-	8E-8	4E-4	4E-3
		W, see ^{116}Te	-	2E+4	9E-6	-	-	-
			-	Thyroid (6E+4)	-	8E-8	-	-
52	Tellurium-134 ²	D, see ^{116}Te	2E+4	2E+4	1E-5	-	-	-
		Thyroid	(2E+4)	Thyroid (5E+4)	-	7E-8	3E-4	3E-3
		W, see ^{116}Te	-	2E+4	1E-5	-	-	-
			-	Thyroid (5E+4)	-	7E-8	-	-
53	Iodine-120m ²	D, all compounds	1E+4	2E+4	9E-6	3E-8	-	-
		Thyroid	(1E+4)	-	-	-	2E-4	2E-3
53	Iodine-120 ²	D, all compounds	4E+3	9E+3	4E-6	-	-	-
		Thyroid	(8E+3)	Thyroid (1E+4)	-	2E-8	1E-4	1E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air	Col. 2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
53	Iodine-121	D, all compounds	1E+4 Thyroid (3E+4)	2E+4 Thyroid (5E+4)	8E-6 -	- 7E-8	- 4E-4	- 4E-3
53	Iodine-123	D, all compounds	3E+3 Thyroid (1E+4)	6E+3 Thyroid (2E+4)	3E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-124	D, all compounds	5E+1 Thyroid (2E+2)	8E+1 Thyroid (3E+2)	3E-8 -	- 4E-10	- 2E-6	- 2E-5
53	Iodine-125	D, all compounds	4E+1 Thyroid (1E+2)	6E+1 Thyroid (2E+2)	3E-8 -	- 3E-10	- 2E-6	- 2E-5
53	Iodine-126	D, all compounds	2E+1 Thyroid (7E+1)	4E+1 Thyroid (1E+2)	1E-8 -	- 2E-10	- 1E-6	- 1E-5
53	Iodine-128 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	5E-5 -	2E-7 -	- 8E-4	- 8E-3
53	Iodine-129	D, all compounds	5E+0 Thyroid (2E+1)	9E+0 Thyroid (3E+1)	4E-9 -	- 4E-11	- 2E-7	- 2E-6
53	Iodine-130	D, all compounds	4E+2 Thyroid (1E+3)	7E+2 Thyroid (2E+3)	3E-7 -	- 3E-9	- 2E-5	- 2E-4
53	Iodine-131	D, all compounds	3E+1 Thyroid (9E+1)	5E+1 Thyroid (2E+2)	2E-8 -	- 2E-10	- 1E-6	- 1E-5
53	Iodine-132m ²	D, all compounds	4E+3 Thyroid (1E+4)	8E+3 Thyroid (2E+4)	4E-6 -	- 3E-8	- 1E-4	- 1E-3
53	Iodine-132	D, all compounds	4E+3 Thyroid (9E+3)	8E+3 Thyroid (1E+4)	3E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-133	D, all compounds	1E+2 Thyroid (5E+2)	3E+2 Thyroid (9E+2)	1E-7 -	- 1E-9	- 7E-6	- 7E-5
53	Iodine-134 ²	D, all compounds	2E+4 Thyroid (3E+4)	5E+4 -	2E-5 -	6E-8 -	- 4E-4	- 4E-3
53	Iodine-135	D, all compounds	8E+2 Thyroid (3E+3)	2E+3 Thyroid (4E+3)	7E-7 -	- 6E-9	- 3E-5	- 3E-4
54	Xenon-120 ²	Submersion ¹	-	-	1E-5	4E-8	-	-
54	Xenon-121 ²	Submersion ¹	-	-	2E-6	1E-8	-	-
54	Xenon-122	Submersion ¹	-	-	7E-5	3E-7	-	-
54	Xenon-123	Submersion ¹	-	-	6E-6	3E-8	-	-
54	Xenon-125	Submersion ¹	-	-	2E-5	7E-8	-	-
54	Xenon-127	Submersion ¹	-	-	1E-5	6E-8	-	-
54	Xenon-129m	Submersion ¹	-	-	2E-4	9E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation	Col.3 DAC	Col. 1 Air	Col. 2 Water	Monthly Average Concentration
			ALI (μCi)	ALI (μCi)	(μCi/ml)	(μCi/ml)	(μCi/ml)	
54	Xenon-131m	Submersion ¹	-	-	4E-4	2E-6	-	-
54	Xenon-133m	Submersion ¹	-	-	1E-4	6E-7	-	-
54	Xenon-133	Submersion ¹	-	-	1E-4	5E-7	-	-
54	Xenon-135m ²	Submersion ¹	-	-	9E-6	4E-8	-	-
54	Xenon-135	Submersion ¹	-	-	1E-5	7E-8	-	-
54	Xenon-138 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
55	Cesium-125 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	-	-
		St wall	(9E+4)	-	-	-	1E-3	1E-2
55	Cesium-127	D, all compounds	6E+4	9E+4	4E-5	1E-7	9E-4	9E-3
55	Cesium-129	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
55	Cesium-130 ²	D, all compounds	6E+4	2E+5	8E-5	3E-7	-	-
		St wall	(1E+5)	-	-	-	1E-3	1E-2
55	Cesium-131	D, all compounds	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
55	Cesium-132	D, all compounds	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
55	Cesium-134m	D, all compounds	1E+5	1E+5	6E-5	2E-7	-	-
		St wall	(1E+5)	-	-	-	2E-3	2E-2
55	Cesium-134	D, all compounds	7E+1	1E+2	4E-8	2E-10	9E-7	9E-6
55	Cesium-135m ²	D, all compounds	1E+5	2E+5	8E-5	3E-7	1E-3	1E-2
55	Cesium-135	D, all compounds	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
55	Cesium-136	D, all compounds	4E+2	7E+2	3E-7	9E-10	6E-6	6E-5
55	Cesium-137	D, all compounds	1E+2	2E+2	6E-8	2E-10	1E-6	1E-5
55	Cesium-138 ²	D, all compounds	2E+4	6E+4	2E-5	8E-8	-	-
		St wall	(3E+4)	-	-	-	4E-4	4E-3
56	Barium-126 ²	D, all compounds	6E+3	2E+4	6E-6	2E-8	8E-5	8E-4
56	Barium-128	D, all compounds	5E+2	2E+3	7E-7	2E-9	7E-6	7E-5
56	Barium-131m ²	D, all compounds	4E+5	1E+6	6E-4	2E-6	-	-
		St wall	(5E+5)	-	-	-	7E-3	7E-2
56	Barium-131	D, all compounds	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
56	Barium-133m	D, all compounds	2E+3	9E+3	4E-6	1E-8	-	-
		LLI wall	(3E+3)	-	-	-	4E-5	4E-4
56	Barium-133	D, all compounds	2E+3	7E+2	3E-7	9E-10	2E-5	2E-4
56	Barium-135m	D, all compounds	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
56	Barium-139 ²	D, all compounds	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
56	Barium-140	D, all compounds	5E+2	1E+3	6E-7	2E-9	-	-
		LLI wall	(6E+2)	-	-	-	8E-6	8E-5
56	Barium-141 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
56	Barium-142 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
57	Lanthanum-131 ²	D, all compounds except those given for W, oxides and hydroxides	5E+4	1E+5	5E-5	2E-7	6E-4	6E-3
			-	2E+5	7E-5	2E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air (µCi/ml)	Col. 2 Water (µCi/ml)	Monthly Average Concentration (µCi/ml)
			ALI (µCi)	ALI (µCi)	(µCi/ml)			
57	Lanthanum-132	D, see ¹³¹ La	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
		W, see ¹³¹ La	-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-135	D, see ¹³¹ La	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see ¹³¹ La	-	9E+4	4E-5	1E-7	-	-
57	Lanthanum-137	D, see ¹³¹ La	1E+4	6E+1	3E-8	-	2E-4	2E-3
				Liver				
		W, see ¹³¹ La	-	(7E+1)	-	1E-10	-	-
57	Lanthanum-138	D, see ¹³¹ La	9E+2	4E+0	1E-9	5E-12	1E-5	1E-4
		W, see ¹³¹ La	-	1E+1	6E-9	2E-11	-	-
				Liver				
57	Lanthanum-140	D, see ¹³¹ La	6E+2	1E+3	6E-7	2E-9	9E-6	9E-5
		W, see ¹³¹ La	-	1E+3	5E-7	2E-9	-	-
57	Lanthanum-141	D, see ¹³¹ La	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		W, see ¹³¹ La	-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-142 ²	D, see ¹³¹ La	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ¹³¹ La	-	3E+4	1E-5	5E-8	-	-
57	Lanthanum-143 ²	D, see ¹³¹ La	4E+4	1E+5	4E-5	1E-7	-	-
				St wall				
		W, see ¹³¹ La	-	9E+4	4E-5	1E-7	-	-
58	Cerium-134	W, all compounds except those given for Y	5E+2	7E+2	3E-7	1E-9	-	-
				LLI wall				
		Y, oxides, hydroxides, and fluorides	-	7E+2	3E-7	9E-10	-	-
58	Cerium-135	W, see ¹³⁴ Ce	2E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		Y, see ¹³⁴ Ce	-	4E+3	1E-6	5E-9	-	-
58	Cerium-137m	W, see ¹³⁴ Ce	2E+3	4E+3	2E-6	6E-9	-	-
				LLI wall				
		Y, see ¹³⁴ Ce	-	4E+3	2E-6	5E-9	-	-
58	Cerium-137	W, see ¹³⁴ Ce	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		Y, see ¹³⁴ Ce	-	1E+5	5E-5	2E-7	-	-
58	Cerium-139	W, see ¹³⁴ Ce	5E+3	8E+2	3E-7	1E-9	7E-5	7E-4
		Y, see ¹³⁴ Ce	-	7E+2	3E-7	9E-10	-	-
58	Cerium-141	W, see ¹³⁴ Ce	2E+3	7E+2	3E-7	1E-9	-	-
				LLI wall				
		Y, see ¹³⁴ Ce	-	6E+2	2E-7	8E-10	-	-
58	Cerium-143	W, see ¹³⁴ Ce	1E+3	2E+3	8E-7	3E-9	-	-
				LLI wall				
		Y, see ¹³⁴ Ce	-	2E+3	7E-7	2E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
58	Cerium-144	W, see ¹³⁴ Ce	2E+2	3E+1	1E-8	4E-11	-	-
		LLI wall	(3E+2)	-	-	-	3E-6	3E-5
		Y, see ¹³⁴ Ce	-	1E+1	6E-9	2E-11	-	-
59	Praseodymium-136 ²	W, all compounds except those given for Y	5E+4	2E+5	1E-4	3E-7	-	-
		St wall	(7E+4)	-	-	-	1E-3	1E-2
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	9E-5	3E-7	-	-
59	Praseodymium-137 ²	W, see ¹³⁶ Pr	4E+4	2E+5	6E-5	2E-7	5E-4	5E-3
		Y, see ¹³⁶ Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-138m	W, see ¹³⁶ Pr	1E+4	5E+4	2E-5	8E-8	1E-4	1E-3
		Y, see ¹³⁶ Pr	-	4E+4	2E-5	6E-8	-	-
59	Praseodymium-139	W, see ¹³⁶ Pr	4E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see ¹³⁶ Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-142m ²	W, see ¹³⁶ Pr	8E+4	2E+5	7E-5	2E-7	1E-3	1E-2
		Y, see ¹³⁶ Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-142	W, see ¹³⁶ Pr	1E+3	2E+3	9E-7	3E-9	1E-5	1E-4
		Y, see ¹³⁶ Pr	-	2E+3	8E-7	3E-9	-	-
59	Praseodymium-143	W, see ¹³⁶ Pr	9E+2	8E+2	3E-7	1E-9	-	-
		LLI wall	(1E+3)	-	-	-	2E-5	2E-4
		Y, see ¹³⁶ Pr	-	7E+2	3E-7	9E-10	-	-
59	Praseodymium-144 ²	W, see ¹³⁶ Pr	3E+4	1E+5	5E-5	2E-7	-	-
		St wall	(4E+4)	-	-	-	6E-4	6E-3
		Y, see ¹³⁶ Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-145	W, see ¹³⁶ Pr	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ¹³⁶ Pr	-	8E+3	3E-6	1E-8	-	-
59	Praseodymium-147 ²	W, see ¹³⁶ Pr	5E+4	2E+5	8E-5	3E-7	-	-
		St wall	(8E+4)	-	-	-	1E-3	1E-2
		Y, see ¹³⁶ Pr	-	2E+5	8E-5	3E-7	-	-
60	Neodymium-136 ²	W, all compounds except those given for Y	1E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	5E+4	2E-5	8E-8	-	-
60	Neodymium-138	W, see ¹³⁶ Nd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		Y, see ¹³⁶ Nd	-	5E+3	2E-6	7E-9	-	-
60	Neodymium-139m	W, see ¹³⁶ Nd	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		Y, see ¹³⁶ Nd	-	1E+4	6E-6	2E-8	-	-
60	Neodymium-139 ²	W, see ¹³⁶ Nd	9E+4	3E+5	1E-4	5E-7	1E-3	1E-2
		Y, see ¹³⁶ Nd	-	3E+5	1E-4	4E-7	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
60	Neodymium-141	W, see ¹³⁶ Nd	2E+5	7E+5	3E-4	1E-6	2E-3	2E-2
		Y, see ¹³⁶ Nd	-	6E+5	3E-4	9E-7	-	-
60	Neodymium-147	W, see ¹³⁶ Nd	1E+3	9E+2	4E-7	1E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹³⁶ Nd	-	8E+2	4E-7	1E-9	-	-
60	Neodymium-149 ²	W, see ¹³⁶ Nd	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
		Y, see ¹³⁶ Nd	-	2E+4	1E-5	3E-8	-	-
60	Neodymium-151 ²	W, see ¹³⁶ Nd	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		Y, see ¹³⁶ Nd	-	2E+5	8E-5	3E-7	-	-
61	Promethium-141 ²	W, all compounds except those given for Y	5E+4	2E+5	8E-5	3E-7	-	-
		St wall (6E+4)	-	-	-	-	8E-4	8E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	7E-5	2E-7	-	-
61	Promethium-143	W, see ¹⁴¹ Pm	5E+3	6E+2	2E-7	8E-10	7E-5	7E-4
		Y, see ¹⁴¹ Pm	-	7E+2	3E-7	1E-9	-	-
61	Promethium-144	W, see ¹⁴¹ Pm	1E+3	1E+2	5E-8	2E-10	2E-5	2E-4
		Y, see ¹⁴¹ Pm	-	1E+2	5E-8	2E-10	-	-
61	Promethium-145	W, see ¹⁴¹ Pm	1E+4	2E+2	7E-8	-	1E-4	1E-3
		Bone surf (2E+2)	-	-	-	3E-10	-	-
		Y, see ¹⁴¹ Pm	-	2E+2	8E-8	3E-10	-	-
61	Promethium-146	W, see ¹⁴¹ Pm	2E+3	5E+1	2E-8	7E-11	2E-5	2E-4
		Y see ¹⁴¹ Pm	-	4E+1	2E-8	6E-11	-	-
61	Promethium-147	W see ¹⁴¹ Pm	4E+3	1E+2	5E-8	-	-	-
		LLI wall (5E+3)	-	2E+2	-	3E-10	7E-5	7E-4
		Y, see ¹⁴¹ Pm	-	1E+2	6E-8	2E-10	-	-
61	Promethium-148m	W, see ¹⁴¹ Pm	7E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		Y, see ¹⁴¹ Pm	-	3E+2	1E-7	5E-10	-	-
61	Promethium-148	W, see ¹⁴¹ Pm	4E+2	5E+2	2E-7	8E-10	-	-
		LLI wall (5E+2)	-	-	-	-	7E-6	7E-5
		Y, see ¹⁴¹ Pm	-	5E+2	2E-7	7E-10	-	-
0		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹⁴¹ Pm	-	2E+3	8E-7	2E-9	-	-
61	Promethium-150	W, see ¹⁴¹ Pm	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ¹⁴¹ Pm	-	2E+4	7E-6	2E-8	-	-
61	Promethium-151	W, see ¹⁴¹ Pm	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		Y, see ¹⁴¹ Pm	-	3E+3	1E-6	4E-9	-	-
62	Samarium-141m ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μCi)	Col. 2 Inhalation ALI (μCi)	Col.3 DAC ($\mu\text{Ci/ml}$)	Col. 1 Air ($\mu\text{Ci/ml}$)	Col. 2 Water ($\mu\text{Ci/ml}$)	Monthly Average Concentration ($\mu\text{Ci/ml}$)
			62	Samarium-141 ²	W, all compounds	5E+4 St wall (6E+4)	2E+5 -	8E-5 -
62	Samarium-142 ²	W, all compounds	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
62	Samarium-145	W, all compounds	6E+3	5E+2	2E-7	7E-10	8E-5	8E-4
62	Samarium-146	W, all compounds	1E+1	4E2	1E-11	-	-	-
62	Samarium-147	W, all compounds	Bone surf (3E+1) 2E+1 Bone surf (3E+1)	Bone surf (6E-2) 4E2 Bone surf (7E-2)	- - 2E-11 -	9E-14 -	3E-7 -	3E-6 -
62	Samarium-151	W, all compounds	1E+4 LLI wall (1E+4)	1E+2 Bone surf (2E+2)	4E-8 -	- 2E-10	- 2E-4	- 2E-3
62	Samarium-153	W, all compounds	2E+3 LLI wall (2E+3)	3E+3 -	1E-6 -	4E-9 -	- 3E-5	- 3E-4
62	Samarium-155 ²	W, all compounds	6E+4 St wall (8E+4)	2E+5 -	9E-5 -	3E-7 -	- 1E-3	- 1E-2
62	Samarium-156	W, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
63	Europium-145	W, all compounds	2E+3	2E+3	8E-7	3E-9	2E-5	2E-4
63	Europium-146	W, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
63	Europium-147	W, all compounds	3E+3	2E+3	7E-7	2E-9	4E-5	4E-4
63	Europium-148	W, all compounds	1E+3	4E+2	1E-7	5E-10	1E-5	1E-4
63	Europium-149	W, all compounds	1E+4	3E+3	1E-6	4E-9	2E-4	2E-3
63	Europium-150 (12.62 h)	W, all compounds	3E+3	8E+3	4E-6	1E-8	4E-5	4E-4
63	Europium-150 (34.2 y)	W, all compounds	8E+2	2E+1	8E-9	3E-11	1E-5	1E-4
63	Europium-152m	W, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
63	Europium-152	W, all compounds	8E+2	2E+1	1E-8	3E-11	1E-5	1E-4
63	Europium-154	W, all compounds	5E+2	2E+1	8E-9	3E-11	7E-6	7E-5
63	Europium-155	W, all compounds	4E+3	9E+1	4E-8	-	5E-5	5E-4
63	Europium-156	W, all compounds	-	Bone surf (1E+2)	-	2E-10	-	-
63	Europium-156	W, all compounds	6E+2	5E+2	2E-7	6E-10	8E-6	8E-5
63	Europium-157	W, all compounds	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
63	Europium-158 ²	W, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
64	Gadolinium-145 ²	D, all compounds except those given for W	5E+4 St wall (5E+4)	2E+5 -	6E-5 -	2E-7 -	- 6E-4	- 6E-3
64	Gadolinium-146	W, oxides, hydroxides, and fluorides	-	2E+5	7E-5	2E-7	-	-
64	Gadolinium-146	D, see ¹⁴⁵ Gd	1E+3	1E+2	5E-8	2E-10	2E-5	2E-4
64	Gadolinium-146	W, see ¹⁴⁵ Gd	-	3E+2	1E-7	4E-10	-	-
64	Gadolinium-147	D, see ¹⁴⁵ Gd	2E+3	4E+3	2E-6	6E-9	3E-5	3E-4
64	Gadolinium-147	W, see ¹⁴⁵ Gd	-	4E+3	1E-6	5E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
64	Gadolinium-148	D, see ¹⁴⁵ Gd	1E+1 Bone surf (2E+1)	8E+3 Bone surf (2E+2)	3E-12 -	- 2E-14	- 3E-7	- 3E-6
		W, see ¹⁴⁵ Gd	-	3E-2 Bone surf (6E-2)	1E-11 -	- 8E-14	- -	- -
64	Gadolinium-149	D, see ¹⁴⁵ Gd	3E+3	2E+3	9E-7	3E-9	4E-5	4E-4
		W, see ¹⁴⁵ Gd	-	2E+3	1E-6	3E-9	-	-
64	Gadolinium-151	D, see ¹⁴⁵ Gd	6E+3	4E+2 Bone surf (6E+2)	2E-7 -	- 9E-10	9E-5 -	9E-4 -
		W, see ¹⁴⁵ Gd	-	1E+3	5E-7	2E-9	-	-
64	Gadolinium-152	D, see ¹⁴⁵ Gd	2E+1 Bone surf (3E+1)	1E-2 Bone surf (2E-2)	4E-12 -	- 3E-14	- 4E-7	- 4E-6
		W, see ¹⁴⁵ Gd	-	4E-2 Bone surf (8E-2)	2E-11 -	- 1E-13	- -	- -
64	Gadolinium-153	D, see ¹⁴⁵ Gd	5E+3	1E+2 Bone surf (2E+2)	6E-8 -	- 3E-10	6E-5 -	6E-4 -
		W, see ¹⁴⁵ Gd	-	6E+2	2E-7	8E-10	-	-
64	Gadolinium-159	D, see ¹⁴⁵ Gd	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ¹⁴⁵ Gd	-	6E+3	2E-6	8E-9	-	-
65	Terbium-147 ²	W, all compounds	9E+3	3E+4	1E-5	5E-8	1E-4	1E-3
65	Terbium-149	W, all compounds	5E+3	7E+2	3E-7	1E-9	7E-5	7E-4
65	Terbium-150	W, all compounds	5E+3	2E+4	9E-6	3E-8	7E-5	7E-4
65	Terbium-151	W, all compounds	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
65	Terbium-153	W, all compounds	5E+3	7E+3	3E-6	1E-8	7E-5	7E-4
65	Terbium-154	W, all compounds	2E+3	4E+3	2E-6	6E-9	2E-5	2E-4
65	Terbium-155	W, all compounds	6E+3	8E+3	3E-6	1E-8	8E-5	8E-4
65	Terbium-156m (5.0 h)	W, all compounds	2E+4	3E+4	1E-5	4E-8	2E-4	2E-3
65	Terbium-156m (24.4 h)	W, all compounds	7E+3	8E+3	3E-6	1E-8	1E-4	1E-3
65	Terbium-156	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
65	Terbium-157	W, all compounds	5E+4	3E+2	1E-7	-	-	-
			LLI wall (5E+4)	Bone surf (6E+2)	-	8E-10	7E-4	7E-3
65	Terbium-158	W, all compounds	1E+3	2E+1	8E-9	3E-11	2E-5	2E-4
65	Terbium-160	W, all compounds	8E+2	2E+2	9E-8	3E-10	1E-5	1E-4
65	Terbium-161	W, all compounds	2E+3	2E+3	7E-7	2E-9	-	-
			LLI wall (2E+3)	-	-	-	3E-5	3E-4
66	Dysprosium-155	W, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
66	Dysprosium-157	W, all compounds	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
66	Dysprosium-159	W, all compounds	1E+4	2E+3	1E-6	3E-9	2E-4	2E-3
66	Dysprosium-165	W, all compounds	1E+4	5E+4	2E-5	6E-8	2E-4	2E-3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			66	Dysprosium-166	W, all compounds	6E+2 LLI wall (8E+2)	7E+2 -	3E-7 -
67	Holmium-155 ²	W, all compounds	4E+4	2E+5	6E-5	2E-7	6E-4	6E-3
67	Holmium-157 ²	W, all compounds	3E+5	1E+6	6E-4	2E-6	4E-3	4E-2
67	Holmium-159 ²	W, all compounds	2E+5	1E+6	4E-4	1E-6	3E-3	3E-2
67	Holmium-161	W, all compounds	1E+5	4E+5	2E-4	6E-7	1E-3	1E-2
67	Holmium-162m ²	W, all compounds	5E+4	3E+5	1E-4	4E-7	7E-4	7E-3
67	Holmium-162 ²	W, all compounds	5E+5 St wall (8E+5)	2E+6 -	1E-3 -	3E-6 -	- 1E-2	- 1E-1
67	Holmium-164m ²	W, all compounds	1E+5	3E+5	1E-4	4E-7	1E-3	1E-2
67	Holmium-164 ²	W, all compounds	2E+5 St wall (2E+5)	6E+5 -	3E-4 -	9E-7 -	- 3E-3	- 3E-2
67	Holmium-166m	W, all compounds	6E+2	7E+0	3E-9	9E-12	9E-6	9E-5
67	Holmium-166	W, all compounds	9E+2 LLI wall (9E+2)	2E+3 -	7E-7 -	2E-9 -	- 1E-5	- 1E-4
67	Holmium-167	W, all compounds	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
68	Erbium-161	W, all compounds	2E+4	6E+4	3E-5	9E-8	2E-4	2E-3
68	Erbium-165	W, all compounds	6E+4	2E+5	8E-5	3E-7	9E-4	9E-3
68	Erbium-169	W, all compounds	3E+3 LLI wall (4E+3)	3E+3 -	1E-6 -	4E-9 -	- 5E-5	- 5E-4
68	Erbium-171	W, all compounds	4E+3	1E+4	4E-6	1E-8	5E-5	5E-4
68	Erbium-172	W, all compounds	1E+3 LLI wall (E+3)	1E+3 -	6E-7 -	2E-9 -	- 2E-5	- 2E-4
69	Thulium-162 ²	W, all compounds	7E+4 St wall (7E+4)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2
69	Thulium-166	W, all compounds	4E+3	1E+4	6E-6	2E-8	6E-5	6E-4
69	Thulium-167	W, all compounds	2E+3 LLI wall (2E+3)	2E+3 -	8E-7 -	3E-9 -	- 3E-5	- 3E-4
69	Thulium-170	W, all compounds	8E+2 LLI wall (1E+3)	2E+2 -	9E-8 -	3E-10 -	- 1E-5	- 1E-4
69	Thulium-171	W, all compounds	1E+4 LLI wall (1E+4)	3E+2 (6E+2)	1E-7 -	- 8E-10	- 2E-4	- 2E-3
69	Thulium-172	W, all compounds	7E+2 LLI wall (8E+2)	1E+3 -	5E-7 -	2E-9 -	- 1E-5	- 1E-4
69	Thulium-173	W, all compounds	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
69	Thulium-175 ²	W, all compounds	7E+4 St wall (9E+4)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			70	Ytterbium-162 ²	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	7E+4 -	3E+5 3E+5	1E-4 1E-4
70	Ytterbium-166	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+3 -	2E+3 2E+3	8E-7 8E-7	3E-9 3E-9	2E-5 -	2E-4 -
70	Ytterbium-167 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	3E+5 -	8E+5 7E+5	3E-4 3E-4	1E-6 1E-6	4E-3 -	4E-2 -
70	Ytterbium-169	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+3 -	8E+2 7E+2	4E-7 3E-7	1E-9 1E-9	2E-5 -	2E-4 -
70	Ytterbium-175	W, see ¹⁶² Yb	3E+3	4E+3	1E-6	5E-9	-	-
		LLI wall	(3E+3)	-	-	-	4E-5	4E-4
		Y, see ¹⁶² Yb	-	3E+3	1E-6	5E-9	-	-
70	Ytterbium-177 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+4 -	5E+4 5E+4	2E-5 2E-5	7E-8 6E-8	2E-4 -	2E-3 -
70	Ytterbium-178 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+4 -	4E+4 4E+4	2E-5 2E-5	6E-8 5E-8	2E-4 -	2E-3 -
71	Lutetium-169	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	3E+3 -	4E+3 4E+3	2E-6 2E-6	6E-9 6E-9	3E-5 -	3E-4 -
71	Lutetium-170	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3 -	2E+3 2E+3	9E-7 8E-7	3E-9 3E-9	2E-5 -	2E-4 -
71	Lutetium-171	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	2E+3 -	2E+3 2E+3	8E-7 8E-7	3E-9 3E-9	3E-5 -	3E-4 -
71	Lutetium-172	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3 -	1E+3 1E+3	5E-7 5E-7	2E-9 2E-9	1E-5 -	1E-4 -
71	Lutetium-173	W, see ¹⁶⁹ Lu	5E+3	3E+2	1E-7	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (5E+2)	-	6E-10	-	-
71	Lutetium-174m	W, see ¹⁶⁹ Lu	2E+3	2E+2	1E-7	-	-	-
		LLI wall	(3E+3)	Bone surf (3E+2)	-	5E-10	4E-5	4E-4
		Y, see ¹⁶⁹ Lu	-	2E+2	9E-8	3E-10	-	-
71	Lutetium-174	W, see ¹⁶⁹ Lu	5E+3	1E+2	5E-8	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (2E+2)	-	3E-10	-	-
71	Lutetium-176m	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	8E+3 -	3E+4 2E+4	1E-5 9E-6	3E-8 3E-8	1E-4 -	1E-3 -
71	Lutetium-176	W, see ¹⁶⁹ Lu	7E+2	5E+0	2E-9	-	1E-5	1E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (1E+1)	-	2E-11	-	-
		Y, see ¹⁶⁹ Lu	-	8E+0	3E-9	1E-1	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
71	Lutetium-177m	W, see ¹⁶⁹ Lu	7E+2	1E+2	5E-8	-	1E-5	1E-4
				Bone surf				
			-	(1E+2)	-	2E-10	-	-
		Y, see ¹⁶⁹ Lu	-	8E+1	3E-8	1E-10	-	-
71	Lutetium-177	W, see ¹⁶⁹ Lu	2E+3	2E+3	9E-7	3E-9	-	-
			LLI wall					
			(3E+3)	-	-	-	4E-5	4E-4
		Y, see ¹⁶⁹ Lu	-	2E+3	9E-7	3E-9	-	-
71	Lutetium-178m ²	W, see ¹⁶⁹ Lu	5E+4	2E+5	8E-5	3E-7	-	-
			St. wall					
			(6E+4)	-	-	-	8E-4	8E-3
		Y, see ¹⁶⁹ Lu	-	2E+5	7E-5	2E-7	-	-
71	Lutetium-178 ²	W, see ¹⁶⁹ Lu	4E+4	1E+5	5E-5	2E-7	-	-
			St wall					
			(4E+4)	-	-	-	6E-4	6E-3
		Y, see ¹⁶⁹ Lu	-	1E+5	5E-5	2E-7	-	-
71	Lutetium-179	W, see ¹⁶⁹ Lu	6E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see ¹⁶⁹ Lu	-	2E+4	6E-6	3E-8	-	-
72	Hafnium-170	D, all compounds except those given for W	3E+3	6E+3	2E-6	8E-9	4E-5	4E-4
		W, oxides, hydroxides, carbides, and nitrates	-	5E+3	2E-6	6E-9	-	-
72	Hafnium-172	D, see ¹⁷⁰ Hf	1E+3	9E+0	4E-9	-	2E-5	2E-4
				Bone surf				
			-	(2E+1)	-	3E-11	-	-
		W, see ¹⁷⁰ Hf	-	4E+1	2E-8	-	-	-
				Bone surf				
			-	(6E+1)	-	8E-11	-	-
72	Hafnium-173	D, see ¹⁷⁰ Hf	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ¹⁷⁰ Hf	-	1E+4	5E-6	2E-8	-	-
72	Hafnium-175	D, see ¹⁷⁰ Hf	3E+3	9E+2	4E-7	-	4E-5	4E-4
				Bone surf				
			-	(1E+3)	-	1E-9	-	-
		W, see ¹⁷⁰ Hf	-	1E+3	5E-7	2E-9	-	-
72	Hafnium-177m ²	D, see ¹⁷⁰ Hf	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		W, see ¹⁷⁰ Hf	-	9E+4	4E-5	1E-7	-	-
72	Hafnium-178m	D, see ¹⁷⁰ Hf	3E+2	1E+0	5E-10	-	3E-6	3E-5
				Bone surf				
			-	(2E+0)	-	3E-12	-	-
		W, see ¹⁷⁰ Hf	-	5E+0	2E-9	-	-	-
				Bone surf				
			-	(9E+0)	-	1E-11	-	-
72	Hafnium-179m	D, see ¹⁷⁰ Hf	1E+3	3E+2	1E-7	-	1E-5	1E-4
				Bone surf				
			-	(6E+2)	-	8E-10	-	-
		W, see ¹⁷⁰ Hf	-	6E+2	3E-7	8E-10	-	-

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			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			72	Hafnium-180m	D, see ^{170}Hf	7E+3	2E+4	9E-6
		W, see ^{170}Hf	-	3E+4	1E-5	4E-8	-	-
72	Hafnium-181	D, see ^{170}Hf	1E+3	2E+2	7E-8	-	2E-5	2E-4
				Bone surf				
			-	(4E+2)	-	6E-10	-	-
		W, see ^{170}Hf	-	4E+2	2E-7	6E-10	-	-
72	Hafnium-182m ²	D, see ^{170}Hf	4E+4	9E+4	4E-5	1E-7	5E-4	5E-3
		W, see ^{170}Hf	-	1E+5	6E-5	2E-7	-	-
72	Hafnium-182	D, see ^{170}Hf	2E+2	8E-1	3E-10	-	-	-
			Bone surf	Bone surf				
			(4E+2)	(2E+0)	-	2E-12	5E-6	5E-5
		W, see ^{170}Hf	-	3E+0	1E-9	-	-	-
			-	Bone surf	-	1E-11	-	-
			-	(7E+0)	-	1E-11	-	-
72	Hafnium-183 ²	D, see ^{170}Hf	2E+4	5E+4	2E-5	6E-8	3E-4	3E-3
		W, see ^{170}Hf	-	6E+4	2E-5	8E-8	-	-
72	Hafnium-184	D, see ^{170}Hf	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ^{170}Hf	-	6E+3	3E-6	9E-9	-	-
73	Tantalum-172 ²	W, all compounds except those given for Y Y, elemental Ta, oxides, hydroxides, halides, carbides, nitrates, and nitrides	4E+4	1E+5	5E-5	2E-7	5E-4	5E-3
			-	1E+5	4E-5	1E-7	-	-
73	Tantalum-173	W, see ^{172}Ta	7E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see ^{172}Ta	-	2E+4	7E-6	2E-8	-	-
73	Tantalum-174 ²	W, see ^{172}Ta	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
		Y, see ^{172}Ta	-	9E+4	4E-5	1E-7	-	-
73	Tantalum-175	W, see ^{172}Ta	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
		Y, see ^{172}Ta	-	1E+4	6E-6	2E-8	-	-
73	Tantalum-176	W, see ^{172}Ta	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
		Y, see ^{172}Ta	-	1E+4	5E-6	2E-8	-	-
73	Tantalum-177	W, see ^{172}Ta	1E+4	2E+4	8E-6	3E-8	2E-4	2E-3
		Y, see ^{172}Ta	-	2E+4	7E-6	2E-8	-	-
73	Tantalum-178	W, see ^{172}Ta	2E+4	9E+4	4E-5	1E-7	2E-4	2E-3
		Y, see ^{172}Ta	-	7E+4	3E-5	1E-7	-	-
73	Tantalum-179	W, see ^{172}Ta	2E+4	5E+3	2E-6	8E-9	3E-4	3E-3
		Y, see ^{172}Ta	-	9E+2	4E-7	1E-9	-	-
73	Tantalum-180m	W, see ^{172}Ta	2E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		Y, see ^{172}Ta	-	6E+4	2E-5	8E-8	-	-
73	Tantalum-180	W, see ^{172}Ta	1E+3	4E+2	2E-7	6E-10	2E-5	2E-4
		Y, see ^{172}Ta	-	2E+1	1E-8	3E-11	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
73	Tantalum-182m ²	W, see ¹⁷² Ta	2E+5 St wall (2E+5)	5E+5 -	2E-4 -	8E-7 -	- 3E-3	- 3E-2
		Y, see ¹⁷² Ta	-	4E+5	2E-4	6E-7	-	-
73	Tantalum-182	W, see ¹⁷² Ta	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		Y, see ¹⁷² Ta	-	1E+2	6E-8	2E-10	-	-
73	Tantalum-183	W, see ¹⁷² Ta	9E+2 LLI wall (1E+3)	1E+3 -	5E-7 -	2E-9 -	- 2E-5	- 2E-4
		Y, see ¹⁷² Ta	-	1E+3	4E-7	1E-9	-	-
73	Tantalum-184	W, see ¹⁷² Ta	2E+3	5E+3	2E-6	8E-9	3E-5	3E-4
		Y, see ¹⁷² Ta	-	5E+3	2E-6	7E-9	-	-
73	Tantalum-185 ²	W, see ¹⁷² Ta	3E+4	7E+4	3E-5	1E-7	4E-4	4E-3
		Y, see ¹⁷² Ta	-	6E+4	3E-5	9E-8	-	-
73	Tantalum-186 ²	W, see ¹⁷² Ta	5E+4 St wall (7E+4)	2E+5 -	1E-4 -	3E-7 -	- 1E-3	- 1E-2
		Y, see ¹⁷² Ta	-	2E+5	9E-5	3E-7	-	-
74	Tungsten-176	D, all compounds	1E+4	5E+4	2E-5	7E-8	1E-4	1E-3
74	Tungsten-177	D, all compounds	2E+4	9E+4	4E-5	1E-7	3E-4	3E-3
74	Tungsten-178	D, all compounds	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
74	Tungsten-179 ²	D, all compounds	5E+5	2E+6	7E-4	2E-6	7E-3	7E-2
74	Tungsten-181	D, all compounds	2E+4	3E+4	1E-5	5E-8	2E-4	2E-3
74	Tungsten-185	D, all compounds	2E+3 LLI wall (3E+3)	7E+3 -	3E-6 -	9E-9 -	- 4E-5	- 4E-4
74	Tungsten-187	D, all compounds	2E+3	9E+3	4E-6	1E-8	3E-5	3E-4
74	Tungsten-188	D, all compounds	4E+2 LLI wall (5E+2)	1E+3 -	5E-7 -	2E-9 -	- 7E-6	- 7E-5
75	Rhenium-177 ²	D, all compounds except those given for W	9E+4 St wall (1E+5)	3E+5 -	1E-4 -	4E-7 -	- 2E-3	- 2E-2
		W, oxides, hydroxides, and nitrates	-	4E+5	1E-4	5E-7	-	-
75	Rhenium-178 ²	D, see ¹⁷⁷ Re	7E+4 St wall (1E+5)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2
		W, see ¹⁷⁷ Re	-	3E+5	1E-4	4E-7	-	-
75	Rhenium-181	D, see ¹⁷⁷ Re	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
		W, see ¹⁷⁷ Re	-	9E+3	4E-6	1E-8	-	-
75	Rhenium-182 (12.7 h)	D, see ¹⁷⁷ Re	7E+3	1E+4	5E-6	2E-8	9E-5	9E-4
		W, see ¹⁷⁷ Re	-	2E+4	6E-6	2E-8	-	-
75	Rhenium-182 (64.0 h)	D, see ¹⁷⁷ Re	1E+3	2E+3	1E-6	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+3	9E-7	3E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			75	Rhenium-184m	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6
		W, see ¹⁷⁷ Re	-	4E+2	2E-7	6E-10	-	-
75	Rhenium-184	D, see ¹⁷⁷ Re	2E+3	4E+3	1E-6	5E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	1E+3	6E-7	2E-9	-	-
75	Rhenium-186m	D, see ¹⁷⁷ Re	1E+3	2E+3	7E-7	-	-	-
		St wall	(2E+3)	(2E+3)	-	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+2	6E-8	2E-10	-	-
75	Rhenium-186	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	2E+3	7E-7	2E-9	-	-
75	Rhenium-187	D, see ¹⁷⁷ Re	6E+5	8E+5	4E-4	-	8E-3	8E-2
		St wall	-	(9E+5)	-	1E-6	-	-
		W, see ¹⁷⁷ Re	-	1E+5	4E-5	1E-7	-	-
75	Rhenium-188m ²	D, see ¹⁷⁷ Re	8E+4	1E+5	6E-5	2E-7	1E-3	1E-2
		W, see ¹⁷⁷ Re	-	1E+5	6E-5	2E-7	-	-
75	Rhenium-188	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	3E+3	1E-6	4E-9	-	-
75	Rhenium-189	D, see ¹⁷⁷ Re	3E+3	5E+3	2E-6	7E-9	4E-5	4E-4
		W, see ¹⁷⁷ Re	-	4E+3	2E-6	6E-9	-	-
76	Osmium-180 ²	D, all compounds except those given for W and Y	1E+5	4E+5	2E-4	5E-7	1E-3	1E-2
		W, halides and nitrates	-	5E+5	2E-4	7E-7	-	-
		Y, oxides and hydroxides	-	5E+5	2E-4	6E-7	-	-
76	Osmium-181 ²	D, see ¹⁸⁰ Os	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	5E+4	2E-5	6E-8	-	-
		Y, see ¹⁸⁰ Os	-	4E+4	2E-5	6E-8	-	-
76	Osmium-182	D, see ¹⁸⁰ Os	2E+3	6E+3	2E-6	8E-9	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
76	Osmium-185	D, see ¹⁸⁰ Os	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-
		Y, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-
76	Osmium-189m	D, see ¹⁸⁰ Os	8E+4	2E+5	1E-4	3E-7	1E-3	1E-2
		W, see ¹⁸⁰ Os	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁸⁰ Os	-	2E+5	7E-5	2E-7	-	-
76	Osmium-191m	D, see ¹⁸⁰ Os	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	2E+4	8E-6	3E-8	-	-
		Y, see ¹⁸⁰ Os	-	2E+4	7E-6	2E-8	-	-
76	Osmium-191	D, see ¹⁸⁰ Os	2E+3	2E+3	9E-7	3E-9	-	-
		LLI wall	(3E+3)	-	-	-	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	2E+3	7E-7	2E-9	-	-
		Y, see ¹⁸⁰ Os	-	1E+3	6E-7	2E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
76	Osmium-193	D, see ^{180}Os	2E+3	5E+3	2E-6	6E-9	-	-
		LLI wall	(2E+3)	-	-	-	2E-5	2E-4
		W, see ^{180}Os	-	3E+3	1E-6	4E-9	-	-
		Y, see ^{180}Os	-	3E+3	1E-6	4E-9	-	-
76	Osmium-194	D, see ^{180}Os	4E+2	4E+1	2E-8	6E-11	-	-
		LLI wall	(6E+2)	-	-	-	8E-6	8E-5
		W, see ^{180}Os	-	6E+1	2E-8	8E-11	-	-
		Y, see ^{180}Os	-	8E+0	3E-9	1E-11	-	-
77	Iridium-182 ²	D, all compounds except those given for W and Y	4E+4	1E+5	6E-5	2E-7	-	-
		St wall	(4E+4)	-	-	-	6E-4	6E-3
		W, halides, nitrates, and metallic iridium	-	2E+5	6E-5	2E-7	-	-
		Y, oxides and hydroxides	-	1E+5	5E-5	2E-7	-	-
77	Iridium-184	D, see ^{182}Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ^{182}Ir	-	3E+4	1E-5	5E-8	-	-
		Y, see ^{182}Ir	-	3E+4	1E-5	4E-8	-	-
77	Iridium-185	D, see ^{182}Ir	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ^{182}Ir	-	1E+4	5E-6	2E-8	-	-
		Y, see ^{182}Ir	-	1E+4	4E-6	1E-8	-	-
77	Iridium-186	D, see ^{182}Ir	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ^{182}Ir	-	6E+3	3E-6	9E-9	-	-
		Y, see ^{182}Ir	-	6E+3	2E-6	8E-9	-	-
77	Iridium-187	D, see ^{182}Ir	1E+4	3E+4	1E-5	5E-8	1E-4	1E-3
		W, see ^{182}Ir	-	3E+4	1E-5	4E-8	-	-
		Y, see ^{182}Ir	-	3E+4	1E-5	4E-8	-	-
77	Iridium-188	D, see ^{182}Ir	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		W, see ^{182}Ir	-	4E+3	1E-6	5E-9	-	-
		Y, see ^{182}Ir	-	3E+3	1E-6	5E-9	-	-
77	Iridium-189	D, see ^{182}Ir	5E+3	5E+3	2E-6	7E-9	-	-
		LLI wall	(5E+3)	-	-	-	7E-5	7E-4
		W, see ^{182}Ir	-	4E+3	2E-6	5E-9	-	-
		Y, see ^{182}Ir	-	4E+3	1E-6	5E-9	-	-
77	Iridium-190m ²	D, see ^{182}Ir	2E+5	2E+5	8E-5	3E-7	2E-3	2E-2
		W, see ^{182}Ir	-	2E+5	9E-5	3E-7	-	-
		Y, see ^{182}Ir	-	2E+5	8E-5	3E-7	-	-
77	Iridium-190	D, see ^{182}Ir	1E+3	9E+2	4E-7	1E-9	1E-5	1E-4
		W, see ^{182}Ir	-	1E+3	4E-7	1E-9	-	-
		Y, see ^{182}Ir	-	9E+2	4E-7	1E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1	Col. 2	Col.3	Col. 1	Col.2	Monthly Average Concentration (µCi/ml)
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/ml)	Air (µCi/ml)	Water (µCi/ml)	
77	Iridium-192m	D, see ¹⁸² Ir	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
		W, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
		Y, see ¹⁸² Ir	-	2E+1	6E-9	2E-11	-	-
77	Iridium-192	D, see ¹⁸² Ir	9E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		W, see ¹⁸² Ir	-	4E+2	2E-7	6E-10	-	-
		Y, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
77	Iridium-194m	D, see ¹⁸² Ir	6E+2	9E+1	4E-8	1E-10	9E-6	9E-5
		W, see ¹⁸² Ir	-	2E+2	7E-8	2E-10	-	-
		Y, see ¹⁸² Ir	-	1E+2	4E-8	1E-10	-	-
77	Iridium-194	D, see ¹⁸² Ir	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see ¹⁸² Ir	-	2E+3	9E-7	3E-9	-	-
		Y, see ¹⁸² Ir	-	2E+3	8E-7	3E-9	-	-
77	Iridium-195m	D, see ¹⁸² Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		Y, see ¹⁸² Ir	-	2E+4	9E-6	3E-8	-	-
77	Iridium-195	D, see ¹⁸² Ir	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸² Ir	-	5E+4	2E-5	7E-8	-	-
		Y, see ¹⁸² Ir	-	4E+4	2E-5	6E-8	-	-
78	Platinum-186	D, all compounds	1E+4	4E+4	2E-5	5E-8	2E-4	2E-3
78	Platinum-188	D, all compounds	2E+3	2E+3	7E-7	2E-9	2E-5	2E-4
78	Platinum-189	D, all compounds	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
78	Platinum-191	D, all compounds	4E+3	8E+3	4E-6	1E-8	5E-5	5E-4
78	Platinum-193m	D, all compounds	3E+3	6E+3	3E-6	8E-9	-	-
		LLI wall	(3E+4)	-	-	-	4E-5	4E-4
78	Platinum-193	D, all compounds	4E+4	2E+4	1E-5	3E-8	-	-
		LLI wall	(5E+4)	-	-	-	6E-4	6E-3
78	Platinum-195m	D, all compounds	2E+3	4E+3	2E-6	6E-9	-	-
		LLI wall	(2E+3)	-	-	-	3E-5	3E-4
78	Platinum-197m ²	D, all compounds	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
78	Platinum-197	D, all compounds	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
78	Platinum-199 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
78	Platinum-200	D, all compounds	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
79	Gold-193	D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, halides and nitrates	-	2E+4	9E-6	3E-8	-	-
		Y, oxides and hydroxides	-	2E+4	8E-6	3E-8	-	-
79	Gold-194	D, see ¹⁹³ Au	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ¹⁹³ Au	-	5E+3	2E-6	8E-9	-	-
		Y, see ¹⁹³ Au	-	5E+3	2E-6	7E-9	-	-
79	Gold-195	D see ¹⁹³ Au	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W see ¹⁹³ Au	-	1E+3	6E-7	2E-9	-	-
		Y see ¹⁹³ Au	-	4E+2	2E-7	6E-10	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air	Col.2 Water	Monthly Average Concentration
			ALI (μ Ci)	ALI (μ Ci)	(μ Ci/ml)	(μ Ci/ml)	(μ Ci/ml)	
79	Gold-198m	D see ¹⁹³ Au	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W see ¹⁹³ Au	-	1E+3	5E-7	2E-9	-	-
		Y see ¹⁹³ Au	-	1E+3	5E-7	2E-9	-	-
79	Gold-198	D see ¹⁹³ Au	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W see ¹⁹³ Au	-	2E+3	8E-7	3E-9	-	-
		Y see ¹⁹³ Au	-	2E+3	7E-7	2E-9	-	-
79	Gold-199	D see ¹⁹³ Au	3E+3	9E+3	4E-6	1E-8	-	-
		LLI wall (3E+3)	-	-	-	-	4E-5	4E-4
		W, see ¹⁹³ Au	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁹³ Au	-	4E+3	2E-6	5E-9	-	-
79	Gold-200m	D, see ¹⁹³ Au	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ¹⁹³ Au	-	3E+3	1E-6	4E-9	-	-
		Y, see ¹⁹³ Au	-	2E+4	1E-6	3E-9	-	-
79	Gold-200 ²	D, see ¹⁹³ Au	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see ¹⁹³ Au	-	8E+4	3E-5	1E-7	-	-
		Y, see ¹⁹³ Au	-	7E+4	3E-5	1E-7	-	-
79	Gold-201 ²	D, see ¹⁹³ Au	7E+4	2E+5	9E-5	3E-7	-	-
		St wall (9E+4)	-	-	-	-	1E-3	1E-2
		W, see ¹⁹³ Au	-	2E+5	1E-4	3E-7	-	-
		Y, see ¹⁹³ Au	-	2E+5	9E-5	3E-7	-	-
80	Mercury-193m	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		D, sulfates	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, oxides, hydroxides, halides, nitrates, and sulfides	-	8E+3	3E-6	1E-8	-	-
80	Mercury-193	Vapor	-	3E+4	1E-5	4E-8	-	-
		Organic D	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		D, see ^{193m} Hg	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ^{193m} Hg	-	4E+4	2E-5	6E-8	-	-
80	Mercury-194	Vapor	-	3E+1	1E-8	4E-11	-	-
		Organic D	2E+1	3E+1	1E-8	4E-11	2E-7	2E-6
		D, see ^{193m} Hg	8E+2	4E+1	2E-8	6E-11	1E-5	1E-4
		W, see ^{193m} Hg	-	1E+2	5E-8	2E-10	-	-
80	Mercury-195m	Vapor	-	4E+3	2E-6	6E-9	-	-
		Organic D	3E+3	6E+3	3E-6	8E-9	4E-5	4E-4
		D, see ^{193m} Hg	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
		W, see ^{193m} Hg	-	4E+3	2E-6	5E-9	-	-
80	Mercury-195	Vapor	-	3E+4	1E-5	4E-8	-	-
		Organic D	2E+4	5E+4	2E-5	6E-8	2E-4	2E-3
		D, see ^{193m} Hg	1E+4	4E+4	1E-5	5E-8	2E-4	2E-3
		W, see ^{193m} Hg	-	3E+4	1E-5	5E-8	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			80	Mercury-197m	Vapor	-	5E+3	2E-6
		Organic D	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		D, see ^{193m} Hg	3E+3	7E+3	3E-6	1E-8	4E-5	4E-4
		W, see ^{193m} Hg	-	5E+3	2E-6	7E-9	-	-
80	Mercury-197	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	7E+3	1E+4	6E-6	2E-8	9E-5	9E-4
		D, see ^{193m} Hg	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see ^{193m} Hg	-	9E+3	4E-6	1E-8	-	-
80	Mercury-199m ²	Vapor	-	8E+4	3E-5	1E-7	-	-
		Organic D	6E+4	2E+5	7E-5	2E-7	-	-
		St wall	(1E+5)	-	-	-	1E-3	1E-2
		D, see ^{193m} Hg	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
		W, see ^{193m} Hg	-	2E+5	7E-5	2E-7	-	-
80	Mercury-203	Vapor	-	8E+2	4E-7	1E-9	-	-
		Organic D	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
		D, see ^{193m} Hg	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		W, see ^{193m} Hg	-	1E+3	5E-7	2E-9	-	-
81	Thallium-194m ²	D, all compounds	5E+4	2E+5	6E-5	2E-7	-	-
		St wall	(7E+4)	-	-	-	1E-3	1E-2
81	Thallium-194 ²	D, all compounds	3E+5	6E+5	2E-4	8E-7	-	-
		St wall	(3E+5)	-	-	-	4E-3	4E-2
81	Thallium-195 ²	D, all compounds	6E+4	1E+5	5E-5	2E-7	9E-4	9E-3
81	Thallium-197	D, all compounds	7E+4	1E+5	5E-5	2E-7	1E-3	1E-2
81	Thallium-198m ²	D, all compounds	3E+4	5E+4	2E-5	8E-8	4E-4	4E-3
81	Thallium-198	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
81	Thallium-199	D, all compounds	6E+4	8E+4	4E-5	1E-7	9E-4	9E-3
81	Thallium-200	D, all compounds	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
81	Thallium-201	D, all compounds	2E+4	2E+4	9E-6	3E-8	2E-4	2E-3
81	Thallium-202	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
81	Thallium-204	D, all compounds	2E+3	2E+3	9E-7	3E-9	2E-5	2E-4
82	Lead-195m ²	D, all compounds	6E+4	2E+5	8E-5	3E-7	8E-4	8E-3
82	Lead-198	D, all compounds	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
82	Lead-199 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
82	Lead-200	D, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
82	Lead-201	D, all compounds	7E+3	2E+4	8E-6	3E-8	1E-4	1E-3
82	Lead-202m	D, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
82	Lead-202	D, all compounds	1E+2	5E+1	2E-8	7E-11	2E-6	2E-5
82	Lead-203	D, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
82	Lead-205	D, all compounds	4E+3	1E+3	6E-7	2E-9	5E-5	5E-4
82	Lead-209	D, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
82	Lead-210	D, all compounds	6E1	2E1	1E-10	-	-	-
		Bone surf	(1E+0)	(4E-1)	-	6E-13	1E-8	1E-7
82	Lead-211 ²	D, all compounds	1E+4	6E+2	3E-7	9E-10	2E-4	2E+3

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			82	Lead-212	D, all compounds	8E+1	3E+1	1E-8
			Bone surf (1E+2)	-	-	-	2E-6	2E-5
82	Lead-214 ²	D, all compounds	9E+3	8E+2	3E-7	1E-9	1E-4	1E-3
83	Bismuth-200 ²	D, nitrates	3E+4	8E+4	4E-5	1E-7	4E-4	4E-3
		W, all other compounds	-	1E+5	4E-5	1E-7	-	-
83	Bismuth-201 ²	D, see ²⁰⁰ Bi	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see ²⁰⁰ Bi	-	4E+4	2E-5	5E-8	-	-
83	Bismuth-202 ²	D, see ²⁰⁰ Bi	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ²⁰⁰ Bi	-	8E+4	3E-5	1E-7	-	-
83	Bismuth-203	D, see ²⁰⁰ Bi	2E+3	7E+3	3E-6	9E-9	3E-5	3E-4
		W, see ²⁰⁰ Bi	-	6E+3	3E-6	9E-9	-	-
83	Bismuth-205	D, see ²⁰⁰ Bi	1E+3	3E+3	1E-6	3E-9	2E-5	2E-4
		W, see ²⁰⁰ Bi	-	1E+3	5E-7	2E-9	-	-
83	Bismuth-206	D, see ²⁰⁰ Bi	6E+2	1E+3	6E-7	2E-9	9E-6	9E-5
		W, see ²⁰⁰ Bi	-	9E+2	4E-7	1E-9	-	-
83	Bismuth-207	D, see ²⁰⁰ Bi	1E+3	2E+3	7E-7	2E-9	1E-5	1E-4
		W, see ²⁰⁰ Bi	-	4E+2	1E-7	5E-10	-	-
83	Bismuth-210m	D, see ²⁰⁰ Bi	4E+1	5E+0	2E-9	-	-	-
			Kidneys (6E+1)	Kidneys (6E+0)	-	9E-12	8E-7	8E-6
		W, see ²⁰⁰ Bi	-	7E-1	3E-10	9E-13	-	-
83	Bismuth-210	D, see ²⁰⁰ Bi	8E+2	2E+2	1E-7	-	1E-5	1E-4
			-	Kidneys (4E+2)	-	5E-10	-	-
		W, see ²⁰⁰ Bi	-	3E+1	1E-8	4E-11	-	-
83	Bismuth-212 ²	D, see ²⁰⁰ Bi	5E+3	2E+2	1E-7	3E-10	7E-5	7E-4
		W, see ²⁰⁰ Bi	-	3E+2	1E-7	4E-10	-	-
83	Bismuth-213 ²	D, see ²⁰⁰ Bi	7E+3	3E+2	1E-7	4E-10	1E-4	1E-3
		W, see ²⁰⁰ Bi	-	4E+2	1E-7	5E-10	-	-
83	Bismuth-214 ²	D, see ²⁰⁰ Bi	2E+4	8E+2	3E-7	1E-9	-	-
			St wall (2E+4)	-	-	-	3E-4	3E-3
		W, see ²⁰⁰ Bi	-	9E-2	4E-7	1E-9	-	-
84	Polonium-203 ²	D, all compounds except those given for W	3E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		W, oxides, hydroxides, and nitrates	-	9E+4	4E-5	1E-7	-	-
84	Polonium-205 ²	D, see ²⁰³ Po	2E+4	4E+4	2E-5	5E-8	3E-4	3E-3
		W, see ²⁰³ Po	-	7E+4	3E-5	1E-7	-	-
84	Polonium-207	D, see ²⁰³ Po	8E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see ²⁰³ Po	-	3E+4	1E-5	4E-8	-	-
84	Polonium-210	D, see ²⁰³ Po	3E+0	6E-1	3E-10	9E-13	4E-8	4E-7
		W, see ²⁰³ Po	-	6E-1	3E-10	9E-13	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1	Col. 2	Col.3	Col. 1	Col. 2	Monthly Average Concentration (µCi/ml)
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/ml)	Air (µCi/ml)	Water (µCi/ml)	
85	Astatine-207 ²	D, halides	6E+3	3E+3	1E-6	4E-9	8E-5	8E-4
		W	-	2E+3	9E-7	3E-9	-	-
85	Astatine-211	D, halides	1E+2	8E+1	3E-8	1E-10	2E-6	2E-5
		W	-	5E+1	2E-8	8E-11	-	-
86	Radon-220	With daughters removed	-	2E+4	7E-6	2E-8	-	-
		With daughters present	-	2E+1	9E-9	3E-11	-	-
			(or 12 working level months)			(or 1.0 working level)		
86	Radon-222	With daughters removed	-	1E+4	4E-6	1E-8	-	-
		With daughters present	-	1E+2	3E-8	1E-10	-	-
			(or 4 working level months)			(or 0.33 working level)		
87	Francium-222 ²	D, all compounds	2E+3	5E+2	2E-7	6E-10	3E-5	3E-4
87	Francium-223 ²	D, all compounds	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
88	Radium-223	W, all compounds	5E+0	7E-1	3E-10	9E-13	-	-
			Bone surf (9E+0)	-	-	-	1E-7	1E-6
88	Radium-224	W, all compounds	8E+0	2E+0	7E-10	2E-12	-	-
			Bone surf (2E+1)	-	-	-	2E-7	2E-6
88	Radium-225	W, all compounds	8E+0	7E-1	3E-10	9E-13	-	-
			Bone surf (2E+1)	-	-	-	2E-7	2E-6
88	Radium-226	W, all compounds	2E+0	6E-1	3E-10	9E-13	-	-
			Bone surf (5E+0)	-	-	-	6E-8	6E-7
88	Radium-227 ²	W, all compounds	2E+4	1E+4	6E-6	-	-	-
			Bone surf (2E+4)	Bone surf (2E+4)	-	3E-8	3E-4	3E-3
88	Radium-228	W, all compounds	2E+0	1E+0	5E-10	2E-12	-	-
			Bone surf (4E+0)	-	-	-	6E-8	6E-7
89	Actinium-224	D, all compounds except those given for W and Y	2E+3	3E+1	1E-8	-	-	-
			LLI wall (2E+3)	Bone surf (4E+1)	-	5E-11	3E-5	3E-4
		W, halides and nitrates	-	5E+1	2E-8	7E-11	-	-
		Y, oxides and hydroxides	-	5E+1	2E-8	6E-11	-	-
89	Actinium-225	D, see ²²⁴ Ac	5E+1	3E-1	1E-10	-	-	-
			LLI wall (5E+1)	Bone surf (5E-1)	-	7E-13	7E-7	7E-6
		W, see ²²⁴ Ac	-	6E-1	3E-10	9E-13	-	-
		Y, see ²²⁴ Ac	-	6E-1	3E-10	9E-13	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
89	Actinium-226	D, see ²²⁴ Ac	1E+2 LLI wall (1E+2)	3E+0 Bone surf (4E+0)	1E-9 -	-	-	2E-5
		W, see ²²⁴ Ac	-	5E+0	2E-9	7E-12	-	-
		Y, see ²²⁴ Ac	-	5E+0	2E-9	6E-12	-	-
89	Actinium-227	D, see ²²⁴ Ac	2E-1 Bone surf (4E-1)	4E-4 Bone surf (8E-4)	2E-13 -	-	1E-15	5E-8
		W, see ²²⁴ Ac	-	2E-3 Bone surf (3E-3)	7E-13 -	-	-	-
		Y, see ²²⁴ Ac	-	4E-3	2E-12	6E-15	-	-
89	Actinium-228	D, see ²²⁴ Ac	2E+3 -	9E+0 Bone surf (2E+1)	4E-9 -	-	3E-5	3E-4
		W see ²²⁴ Ac	-	4E+1 Bone surf (6E+1)	2E-8 -	-	-	-
		Y see ²²⁴ Ac	-	4E+1	2E-8	6E-11	-	-
90	Thorium-226 ²	W, all compounds except those given for Y	5E+3 St wall (5E+3)	2E+2 -	6E-8 -	2E-10	-	-
		Y, oxides and hydroxides	-	1E+2	6E-8	2E-10	7E-5	7E-4
90	Thorium-227	W, see ²²⁶ Th	1E+2	3E-1	1E-10	5E-13	2E-6	2E-5
		Y, see ²²⁶ Th	-	3E-1	1E-10	5E-13	-	-
90	Thorium-228	W, see ²²⁶ Th	6E+0 Bone surf (1E+1)	1E-2 Bone surf (2E-2)	4E-12 -	-	3E-14	2E-6
		Y, see ²²⁶ Th	-	2E-2	7E-12	2E-14	-	-
90	Thorium-229	W, see ²²⁶ Th	6E-1 Bone surf (1E+0)	9E-4 Bone surf (2E-3)	4E-13 -	-	3E-15	2E-7
		Y, see ²²⁶ Th	-	2E-3 Bone surf (3E-3)	1E-12 -	-	-	-
90	Thorium-230	W, see ²²⁶ Th	4E+0 Bone surf (9E+0)	6E-3 Bone surf (2E-2)	3E-12 -	-	2E-14	1E-6
		Y, see ²²⁶ Th	-	2E-2 Bone surf (2E-2)	6E-12 -	-	-	-
90	Thorium-231	W, see ²²⁸ Th	4E+3	6E+3	3E-6	9E-9	5E-5	5E-4
		Y, see ²²⁸ Th	-	6E+3	3E-6	9E-9	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
90	Thorium-232	W, see ²²⁸ Th	7E-1 Bone surf (2E+0)	1E-3 Bone surf (3E-3)	5E-13 -	-	-	3E-7
		Y, see ²²⁸ Th	-	3E-3 Bone surf (4E-3)	1E-12 -	-	-	-
90	Thorium-234	W, see ²²⁸ Th	3E+2 LLI wall (4E+2)	2E+2 -	8E-8 -	3E-10 -	-	5E-5
		Y, see ²²⁸ Th	-	2E+2	6E-8	2E-10	-	-
91	Protactinium-227 ²	W, all compounds except those given for Y, oxides and hydroxides	4E+3 -	1E+2 1E+2	5E-8 4E-8	2E-10 1E-10	5E-5 -	5E-4 -
91	Protactinium-228	W, see ²²⁷ Pa	1E+3 -	1E+1 Bone surf (2E+1)	5E-9 -	-	2E-5	2E-4
		Y, see ²²⁷ Pa	-	1E+1	5E-9	2E-11	-	-
91	Protactinium-230	W, see ²²⁷ Pa	6E+2 Bone surf (9E+2)	5E+0 -	2E-9 -	7E-12 -	-	1E-5 1E-4
		Y, see ²²⁷ Pa	-	4E+0	1E-9	5E-12	-	-
91	Protactinium-231	W, see ²²⁷ Pa	2E-1 Bone surf (5E-1)	2E-3 Bone surf (4E-3)	6E-13 -	-	-	-
		Y, see ²²⁷ Pa	-	4E-3 Bone surf (6E-3)	2E-12 -	-	-	-
91	Protactinium-232	W, see ²²⁷ Pa	1E+3 -	2E+1 Bone surf (6E+1)	9E-9 -	-	2E-5	2E-4
		Y, see ²²⁷ Pa	-	6E+1 Bone surf (7E+1)	2E-8 -	-	-	-
91	Protactinium-233	W, see ²²⁷ Pa	1E+3 LLI wall (2E+3)	7E+2 -	3E-7 -	1E-9 -	-	2E-4
		Y, see ²²⁷ Pa	-	6E+2	2E-7	8E-10	-	-
91	Protactinium-234	W, see ²²⁷ Pa	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		Y, see ²²⁷ Pa	-	7E+3	3E-6	9E-9	-	-
92	Uranium-230	D, UF, UOF, UO(NO)	4E+0 Bone surf (6E+0)	4E-1 Bone surf (6E-1)	2E-10 -	-	-	-
		W, UO, UF, UCl	-	4E-1	1E-10	5E-13	-	-
		Y, UO, UO	-	3E-1	1E-10	4E-13	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col.2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
92	Uranium-231	D, see ²³⁰ U	5E+3	8E+3	3E-6	1E-8	-	-
			LLI wall (4E+3)	-	-	-	6E-5	6E-4
		W, see ²³⁰ U	-	6E+3	2E-6	8E-9	-	-
92	Uranium-232	Y, see ²³⁰ U	-	5E+3	2E-6	6E-9	-	-
		D, see ²³⁰ U	2E+0	2E-1	9E-11	-	-	-
			Bone surf (4E+0)	Bone surf (4E-1)	-	6E-13	6E-8	6E-7
92	Uranium-233	W, see ²³⁰ U	-	4E-1	2E-10	5E-13	-	-
		Y, see ²³⁰ U	-	8E-3	3E-12	1E-14	-	-
		D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
92	Uranium-234 ³		Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
		W, see ²³⁰ U	-	7E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	5E-14	-	-
92	Uranium-235 ³	D, see ²³⁰ U	1E+1	1E+0	6E-10	-	-	-
			Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
92	Uranium-236	Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
		D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
			Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
92	Uranium-237	W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
		D, see ²³⁰ U	2E+3	3E+3	1E-6	4E-9	-	-
92	Uranium-238 ³		LLI wall (2E+3)	-	-	-	3E-5	3E-4
		W, see ²³⁰ U	-	2E+3	7E-7	2E-9	-	-
		Y, see ²³⁰ U	-	2E+3	6E-7	2E-9	-	-
92	Uranium-239 ²	D, see ²³⁰ U	1E+1	1E+0	6E-10	-	-	-
			Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
92	Uranium-239 ²	Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
		D, see ²³⁰ U	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		W, see ²³⁰ U	-	2E+5	7E-5	2E-7	-	-
	Y, see ²³⁰ U	-	2E+5	6E-5	2E-7	-	-	

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
92	Uranium-240	D, see ²³⁰ U	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see ²³⁰ U	-	3E+3	1E-6	4E-9	-	-
		Y, see ²³⁰ U	-	2E+3	1E-6	3E-9	-	-
92	Uranium-natural ³	D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
		Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6	
		W, see ²³⁰ U	-	8E-1	3E-10	9E-13	-	-
		Y, see ²³⁰ U	-	5E-2	2E-11	9E-24	-	-
93	Neptunium-232 ²	W, all compounds	1E+5	2E+3	7E-7	-	2E-3	2E-2
		Bone surf (5E+2)	Bone surf (5E+2)	-	6E-9	-	-	
93	Neptunium-233 ²	W, all compounds	8E+5	3E+6	1E-3	4E-6	1E-2	1E-1
93	Neptunium-234	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
93	Neptunium-235	W, all compounds	2E+4	8E+2	3E-7	-	-	-
		LLI wall (2E+4)	Bone surf (1E+3)	-	2E-9	3E-4	3E-3	
93	Neptunium-236 (1.15E+5 y)	W, all compounds	3E+0	2E-2	9E-12	-	-	-
		Bone surf (6E+0)	Bone surf (5E-2)	-	8E-14	9E-8	9E-7	
93	Neptunium-236 (22.5 h)	W, all compounds	3E+3	3E+1	1E-8	-	-	-
		Bone surf (4E+3)	Bone surf (7E+1)	-	1E-10	5E-5	5E-4	
93	Neptunium-237	W, all compounds	5E-1	4E-3	2E-12	-	-	-
		Bone surf (1E+0)	Bone surf (1E-2)	-	1E-14	2E-8	2E-7	
93	Neptunium-238	W, all compounds	1E+3	6E+1	3E-8	-	2E-5	2E-4
		Bone surf (2E+2)	Bone surf (2E+2)	-	2E-10	-	-	
93	Neptunium-239	W, all compounds	2E+3	2E+3	9E-7	3E-9	-	-
		LLI wall (2E+3)	-	-	-	2E-5	2E-4	
93	Neptunium-240 ²	W, all compounds	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
94	Plutonium-234	W, all compounds except PuO	8E+3	2E+2	9E-8	3E-10	1E-4	1E-3
		Y, PuO	-	2E+2	8E-8	3E-10	-	-
94	Plutonium-235 ²	W, see ²³⁴ Pu	9E+5	3E+6	1E-3	4E-6	1E-2	1E-1
		Y, see ²³⁴ Pu	-	3E+6	1E-3	3E-6	-	-
94	Plutonium-236	W, see ²³⁴ Pu	2E+0	2E-2	8E-12	-	-	-
		Bone surf (4E+0)	Bone surf (4E-2)	-	5E-14	6E-8	6E-7	
		Y, see ²³⁴ Pu	-	4E-2	2E-11	6E-14	-	-
94	Plutonium-237	W, see ²³⁴ Pu	1E+4	3E+3	1E-6	5E-9	2E-4	2E-3
		Y, see ²³⁴ Pu	-	3E+3	1E-6	4E-9	-	-
94	Plutonium-238	W, see ²³⁴ Pu	9E-1	7E-3	3E-12	-	-	-
		Bone surf (2E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7	
		Y, see ²³⁴ Pu	-	2E-2	8E-12	2E-14	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
94	Plutonium-239	W, see ²³⁴ Pu	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-240	W, see ²³⁴ Pu	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-241	W, see ²³⁴ Pu	4E+1 Bone surf (7E+1)	3E-1 Bone surf (6E-1)	1E-10 -	-	-	1E-5
		Y, see ²³⁴ Pu	-	8E-1 Bone surf (1E+0)	3E-10 -	-	-	-
94	Plutonium-242	W, see ²³⁴ Pu	8E-1 Bone surf (1E+0)	7E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-243	W, see ²³⁴ Pu	2E+4	4E+4	2E-5	5E-8	2E-4	2E-3
		Y, see ²³⁴ Pu	-	4E+4	2E-5	5E-8	-	-
94	Plutonium-244	W, see ²³⁴ Pu	8E-1 Bone surf (2E+0)	7E-3 Bone surf (1E-2)	3E-12 -	-	-	2E-7
		Y, see ²³⁴ Pu	-	2E-2 Bone surf (2E-2)	7E-12 -	-	-	-
94	Plutonium-245	W, see ²³⁴ Pu	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		Y, see ²³⁴ Pu	-	4E+3	2E-6	6E-9	-	-
94	Plutonium-246	W, see ²³⁴ Pu	4E+2 LLI wall (4E+2)	3E+2 -	1E-7 -	4E-10 -	- 6E-6	- 6E-5
		Y, see ²³⁴ Pu	-	3E+2	1E-7	4E-10	-	-
95	Americium-237 ²	W, all compounds	8E+4	3E+5	1E-4	4E-7	1E-3	1E-2
95	Americium-238 ²	W, all compounds	4E+4	3E+3 Bone surf (6E+3)	1E-6 -	- 9E-9	5E-4 -	5E-3 -
95	Americium-239	W, all compounds	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
95	Americium-240	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
95	Americium-241	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
95	Americium-242m	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
95	Americium-242	W, all compounds	4E+3	8E+1 Bone surf (9E+1)	4E-8 -	-	5E-5	5E-4
95	Americium-243	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
95	Americium-244m ²	W, all compounds	6E+4 St wall (8E+4)	4E+3 Bone surf (7E+3)	2E-6 -	-	-	-
95	Americium-244	W, all compounds	3E+3	2E+2 Bone surf (3E+2)	8E-8 -	-	4E-5	4E-4
95	Americium-245	W, all compounds	3E+4	8E+4	3E-5	4E-10	-	-
95	Americium-246m ²	W, all compounds	5E+4 St wall (6E+4)	2E+5 -	8E-5 -	3E-7	-	-
95	Americium-246 ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
96	Curium-238	W, all compounds	2E+4	1E+3	5E-7	2E-9	2E-4	2E-3
96	Curium-240	W, all compounds	6E+1 Bone surf (8E+1)	6E-1 Bone surf (6E-1)	2E-10 -	-	-	-
96	Curium-241	W, all compounds	1E+3	3E+1 Bone surf (4E+1)	1E-8 -	-	2E-5	2E-4
96	Curium-242	W, all compounds	3E+1 Bone surf (5E+1)	3E-1 Bone surf (3E-1)	1E-10 -	-	-	-
96	Curium-243	W, all compounds	1E+0	9E-3	4E-12	-	-	-
96	Curium-244	W, all compounds	2E+0 Bone surf (2E+0)	2E-2 Bone surf (2E-2)	-	2E-14	3E-8	3E-7
96	Curium-244	W, all compounds	1E+0 Bone surf (3E+0)	1E-2 Bone surf (2E-2)	5E-12 -	-	-	-
96	Curium-245	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
96	Curium-246	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
96	Curium-247	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	-	-	-
96	Curium-248	W, all compounds	2E-1 Bone surf (4E-1)	2E-3 Bone surf (3E-3)	7E-13 -	-	-	-
						4E-15	5E-9	5E-8

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
			96	Curium-249 ²	W, all compounds	5E+4	2E+4	7E-6
				Bone surf				
			-	(3E+4)	-	4E-8	-	-
96	Curium-250	W, all compounds	4E-2	3E-4	1E-13	-	-	-
			Bone surf	Bone surf				
			(6E-2)	(5E-4)	-	8E-16	9E-10	9E-9
97	Berkelium-245	W, all compounds	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
97	Berkelium-246	W, all compounds	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
97	Berkelium-247	W, all compounds	5E-1	4E-3	2E-12	-	-	-
			Bone surf	Bone surf				
			(1E+0)	(9E-3)	-	1E-14	2E-8	2E-7
97	Berkelium-249	W, all compounds	2E+2	2E+0	7E-10	-	-	-
			Bone surf	Bone surf				
			(5E+2)	(4E+0)	-	5E-12	6E-6	6E-5
97	Berkelium-250	W, all compounds	9E+3	3E+2	1E-7	-	1E-4	1E-3
				Bone surf				
			-	(7E+2)	-	1E-9	-	-
98	Californium-244 ²	W, all compounds except those given for Y	3E+4	6E+2	2E-7	8E-10	-	-
			St wall					
			(3E+4)	-	-	-	4E-4	4E-3
		Y, oxides and hydroxides	-	6E+2	2E-7	8E-10	-	-
98	Californium-246	W, see ²⁴⁴ Cf	4E+2	9E+0	4E-9	1E-11	5E-6	5E-5
		Y, see ²⁴⁴ Cf	-	9E+0	4E-9	1E-11	-	-
98	Californium-248	W, see ²⁴⁴ Cf	8E+0	6E-2	3E-11	-	-	-
			Bone surf	Bone surf				
			(2E+1)	(1E-1)	-	2E-13	2E-7	2E-6
		Y, see ²⁴⁴ Cf	-	1E-1	4E-11	1E-13	-	-
98	Californium-249	W, see ²⁴⁴ Cf	5E-1	4E-3	2E-12	-	-	-
			Bone surf	Bone surf				
			(1E+0)	(9E-3)	-	1E-14	2E-8	2E-7
		Y, see ²⁴⁴ Cf	-	1E-2	4E-12	-	-	-
				Bone surf				
			-	(1E-2)	-	2E-14	-	-
98	Californium-250	W, see ²⁴⁴ Cf	1E+0	9E-3	4E-12	-	-	-
			Bone surf	Bone surf				
			(2E+0)	(2E-2)	-	3E-14	3E-8	3E-7
		Y, see ²⁴⁴ Cf	-	3E-2	1E-11	4E-14	-	-
98	Californium-251	W, see ²⁴⁴ Cf	5E-1	4E-3	2E-12	-	-	-
			Bone surf	Bone surf				
			(1E+0)	(9E-3)	-	1E-14	2E-8	2E-7
		Y, see ²⁴⁴ Cf	-	1E-2	4E-12	-	-	-
				Bone surf				
			-	(1E-2)	-	2E-14	-	-
98	Californium-252	W, see ²⁴⁴ Cf	2E+0	2E-2	8E-12	-	-	-
			Bone surf	Bone surf				
			(5E+0)	(4E-2)	-	5E-14	7E-8	7E-7
		Y, see ²⁴⁴ Cf	-	3E-2	1E-11	5E-14	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI (μ Ci)	Col. 2 Inhalation ALI (μ Ci)	Col.3 DAC (μ Ci/ml)	Col. 1 Air (μ Ci/ml)	Col. 2 Water (μ Ci/ml)	Monthly Average Concentration (μ Ci/ml)
98	Californium-253	W, see ²⁴⁴ Cf	2E+2	2E+0	8E-10	3E-12	-	-
			Bone surf (4E+2)	-	-	-	5E-6	5E-5
		Y, see ²⁴⁴ Cf	-	2E+0	7E-10	2E-12	-	-
98	Californium-254	W, see ²⁴⁴ Cf	2E+0	2E-2	9E-12	3E-14	3E-8	3E-7
		Y, see ²⁴⁴ Cf	-	2E-2	7E-12	2E-14	-	-
99	Einsteinium-250	W, all compounds	4E+4	5E+2	2E-7	-	6E-4	6E-3
				Bone surf (1E+3)	-	2E-9	-	-
99	Einsteinium-251	W, all compounds	7E+3	9E+2	4E-7	-	1E-4	1E-3
				Bone surf (1E+3)	-	2E-9	-	-
99	Einsteinium-253	W, all compounds	2E+2	1E+0	6E-10	2E-12	2E-6	2E-5
99	Einsteinium-254m	W, all compounds	3E+2	1E+1	4E-9	1E-11	-	-
			LLI wall (3E+2)	-	-	-	4E-6	4E-5
99	Einsteinium-254	W, all compounds	8E+0	7E-2	3E-11	-	-	-
			Bone surf (2E+1)	Bone surf (1E-1)	-	2E-13	2E-7	2E-6
100	Fermium-252	W, all compounds	5E+2	1E+1	5E-9	2E-11	6E-6	6E-5
100	Fermium-253	W, all compounds	1E+3	1E+1	4E-9	1E-11	1E-5	1E-4
100	Fermium-254	W, all compounds	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
100	Fermium-255	W, all compounds	5E+2	2E+1	9E-9	3E-11	7E-6	7E-5
100	Fermium-257	W, all compounds	2E+1	2E-1	7E-11	-	-	-
			Bone surf (4E+1)	Bone surf (2E-1)	-	3E-13	5E-7	5E-6
101	Mendelevium-257	W, all compounds	7E+3	8E+1	4E-8	-	1E-4	1E-3
				Bone surf (9E+1)	-	1E-10	-	-
101	Mendelevium-258	W, all compounds	3E+1	2E-1	1E-10	-	-	-
			Bone surf (5E+1)	Bone surf (3E-1)	-	5E-13	6E-7	6E-6
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours	Submersion ¹	-	2E+2	1E-7	1E-9	-	-
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life greater than 2 hours.	...	-	2E-1	1E-10	1E-12	1E-8	1E-7

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1	Col. 2	Col.3	Col. 1	Col.2	Monthly Average Concentration (μCi/ml)
			Oral Ingestion ALI (μCi)	Inhalation ALI (μCi)	DAC (μCi/ml)	Air (μCi/ml)	Water (μCi/ml)	
	Any single radionuclide not listed above that decays by alpha emission or spontaneous fission, or any mixture for which either the identity or the concentration of any radionuclide in the mixture is not known.	...	-	4E-4	2E-13	1E-15	2E-9	2E-8

FOOTNOTES:

- ¹ "Submersion" means that values given are for submersion in a hemispherical semi-infinite cloud of airborne material.
- ² These radionuclides have radiological half-lives of less than 2 hours. The total effective dose equivalent received during operations with these radionuclides might include a significant contribution from external exposure. The DAC values for all radionuclides, other than those designated Class "Submersion," are based upon the committed effective dose equivalent due to the intake of the radionuclide into the body and do NOT include potentially significant contributions to dose equivalent from external exposures. The licensee may substitute 1E-7 μCi/ml for the listed DAC to account for the submersion dose prospectively but shall use individual monitoring devices or other radiation-measuring instruments that measure external exposure to demonstrate compliance with the limits. (See R12-1-410)
- ³ For soluble mixtures of U-238, U-234, and U-235 in air, chemical toxicity may be the limiting factor (see R12-1-408(E)). If the percent by weight (enrichment) of U-235 is not greater than 5, the concentration value for a 40-hour work week is 0.2 milligrams uranium per cubic meter of air average. For any enrichment, the product of the average concentration and time of exposure during a 40-hour work week shall not exceed 8E-3 (SA) μCi-hr/ml, where SA is the specific activity of the uranium inhaled. The specific activity for natural uranium is 6.77E-7 curies per gram U. The specific activity for other mixtures of U-238, U-235, and U-234, if not known, shall be:

$$SA = 3.6E-7 \text{ curies/gram U-depleted}$$

$$SA = [0.4 + 0.38 (\text{enrichment}) + 0.0034 (\text{enrichment})^2] E-6, \text{ enrichment} > 0.72$$
 where enrichment is the percentage by weight of U-235, expressed as percent.

NOTE:

- 1. If the identity of each radionuclide in a mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.
- 2. If the identity of each radionuclide in the mixture is not known, but it is known that certain radionuclides specified in this Appendix are not present in the mixture, the inhalation ALI, DAC, and effluent and sewage concentrations for the mixture are the lowest values specified in this Appendix for any radionuclide that is not known to be absent from the mixture; or

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1	Col. 2	Col.3	Col. 1	Col.2	Monthly Average Concentration (μCi/ml)
			Oral Ingestion ALI (μCi)	Inhalation ALI (μCi)	DAC (μCi/ml)	Air (μCi/ml)	Water (μCi/ml)	
	If it is known that Ac-227-D and Cm-250-W are not present		-	7E-4	3E-13	-	-	-
	If, in addition, it is known that Ac-227-W,Y, Th-229-W,Y, Th-230-W, Th-232-W,Y, Pa-231-W,Y, Np-237-W, Pu-239-W, Pu-240-W, Pu-242-W, Am-241-W, Am-242m-W, Am-243-W, Cm-245-W, Cm-246-W, Cm-247-W, Cm-248-W, Bk-247-W, Cf-249-W, and Cf-251-W are not present		-	7E-3	3E-12	-	-	-

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Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentrations		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2 Inhalation ALI	Col.3 DAC	Col. 1 Air	Col. 2 Water	Monthly Average Concentration
			(μCi)	(μCi)	(μCi/ml)	(μCi/ml)	(μCi/ml)	
	If, in addition, it is known that Sm-146-W, Sm-147-W, Gd-148-D,W, Gd-152-D,W, Th-228-W,Y, Th-230-Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, Np-236-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-Y, Pu-240-Y, Pu-242-Y, Pu-244-W,Y, Cm-243-W, Cm-244-W, Cf-248-W, Cf-249-Y, Cf-250-W,Y, Cf-251-Y, Cf-252-WY, and Cf-254-W,Y are not present		-	7E-2	3E-11	-	-	-
	If, in addition, it is known that Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-Y, Es-254-W, Fm-257-W, and Md-258-W are not present		-	7E-1	3E-10	-	-	-
	If, in addition, it is known that Si-32-Y, Ti-44-Y, Fe-60-D, Sr-90-Y, Zr-93-D, Cd-113m-D, Cd-113-D, In-115-D,W, La-138-D, Lu-176-W, Hf-178m-D,W, Hf-182-D,W, Bi-210m-D, Ra-224-W, Ra-228-W, Ac-226-D,W,Y, Pa-230-W,Y, U-233-D,W, U-234-D,W, U-235-D,W, U-236-D,W, U-238-D,W, Pu-241-Y, Bk-249-W, Cf-253-W,Y, and Es-253-W are not present		-	7E+0	3E-9	-	-	-
	If it is known that Ac-227-D,W,Y, Th-229-W,Y, Th-232-W,Y, Pa-231-W,Y, Cm-248-W, and Cm-250-W are not present		-	-	-	1E-14	-	-
	If, in addition, it is known that Sm-146-W, Gd-148-D,W, Gd-152-D, Th-228-W,Y, Th-230-W,Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, U-Nat-Y, Np-236-W, Np-237-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-W,Y, Pu-240-W,Y, Pu-242-W,Y, Pu-244-W,Y, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-244-W, Cm-245-W, Cm-246-W, Cm-247-W, Bk-247-W, Cf-249-W,Y, Cf-250-W,Y, Cf-251-W,Y, Cf-252-W,Y, and Cf-254-W,Y are not present		-	-	-	1E-13	-	-
	If, in addition, it is known that Sm-147-W, Gd-152-W, Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, U-Nat-W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-W,Y, Es-254-W, Fm-257-W, and Md-258-W are not present		-	-	-	-	1E-12	-
	If, in addition it is known that Fe-60, Sr-90, Cd-113m, Cd-113, In-115, I-129, Cs-134, Sm-145, Sm-147, Gd-148, Gd-152, Hg-194 (organic), Bi-210m, Ra-223, Ra-224, Ra-225, Ac-225, Th-228, Th-230, U-233, U-234, U-235, U-236, U-238, U-Nat, Cm-242, Cf-248, Es-254, Fm-257, and Md-258 are not present		-	-	-	-	1E-6	1E-5

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3. If a mixture of radionuclides consists of Uranium and its daughters in ore dust (10 µm AMAD particle distribution assumed) prior to chemical separation of the Uranium from the ore, the following values may be used for the DAC of the mixture: 6E-11 µCi of gross alpha activity from Uranium-238, Uranium-234, Thorium-230, and Radium-226 per milliliter of air; 3E-11 µCi of natural uranium per milliliter of air; or 45 micrograms of natural uranium per cubic meter of air.
4. If the identity and concentration of each radionuclide in a mixture are known, the limiting values should be derived as follows: determine, for each radionuclide in the mixture, the ratio between the concentration present in the mixture and the concentration otherwise established in Appendix B to Article 4 for the specific radionuclide when not in a mixture. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity").
Example: If radionuclides "A," "B," and "C" are present in concentrations C_A , C_B , and C_C , and if the applicable DACs are DAC_A , DAC_B , and DAC_C respectively then the concentrations shall be limited so that the following relationship exists:

$$\frac{C_A}{DAC_A} + \frac{C_B}{DAC_B} + \frac{C_C}{DAC_C} \leq 1$$

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Section repealed; new Section adopted effective August 10, 1994 (Supp. 94-3).

Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

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APPENDIX C. QUANTITIES¹ OF LICENSED OR REGISTERED MATERIAL REQUIRING LABELING

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Hydrogen-3	1,000	Nickel-56	100
Beryllium-7	1,000	Nickel-57	100
Beryllium-10	1	Nickel-59	100
Carbon-11	1,000	Nickel-63	100
Carbon-14	1,000	Nickel-65	1,000
Fluorine-18	1,000	Nickel-66	10
Sodium-22	10	Copper-60	1,000
Sodium-24	100	Copper-61	1,000
Magnesium-28	100	Copper-64	1,000
Aluminum-26	10	Copper-67	1,000
Silicon-31	1,000	Zinc-62	100
Silicon-32	1	Zinc-63	1,000
Phosphorus-32	10	Zinc-65	10
Phosphorus-33	100	Zinc-69m	100
Sulfur-35	100	Zinc-69	1,000
Chlorine-36	10	Zinc-71m	1,000
Chlorine-38	1,000	Zinc-72	100
Chlorine-39	1,000	Gallium-65	1,000
Argon-39	1,000	Gallium-66	100
Argon-41	1,000	Gallium-67	1,000
Potassium-40	100	Gallium-68	1,000
Potassium-42	1,000	Gallium-70	1,000
Potassium-43	1,000	Gallium-72	100
Potassium-44	1,000	Gallium-73	1,000
Potassium-45	1,000	Germanium-66	1,000
Calcium-41	100	Germanium-67	1,000
Calcium-45	100	Germanium-68	10
Calcium-47	100	Germanium-69	1,000
Scandium-43	1,000	Germanium-71	1,000
Scandium-44m	100	Germanium-75	1,000
Scandium-44	100	Germanium-77	1,000
Scandium-46	10	Germanium-78	1,000
Scandium-47	100	Arsenic-69	1,000
Scandium-48	100	Arsenic-70	1,000
Scandium-49	1,000	Arsenic-71	100
Titanium-44	1	Arsenic-72	100
Titanium-45	1,000	Arsenic-73	100
Vanadium-47	1,000	Arsenic-74	100
Vanadium-48	100	Arsenic-76	100
Vanadium-49	1,000	Arsenic-77	100
Chromium-48	1,000	Arsenic-78	1,000
Chromium-49	1,000	Selenium-70	1,000
Chromium-51	1,000	Selenium-73m	1,000
Manganese-51	1,000	Selenium-73	100
Manganese-52m	1,000	Selenium-75	100
Manganese-52	100	Selenium-79	100
Manganese-53	1,000	Selenium-81m	1,000
Manganese-54	100	Selenium-81	1,000
Manganese-56	1,000	Selenium-83	1,000
Iron-52	100	Bromine-74m	1,000
Iron-55	100	Bromine-74	1,000
Iron-59	10	Bromine-75	1,000
Iron-60	1	Bromine-76	100
Cobalt-55	100	Bromine-77	1,000
Cobalt-56	10	Bromine-80m	1,000
Cobalt-57	100	Bromine-80	1,000
Cobalt-58m	1,000	Bromine-82	100
Cobalt-58	100	Bromine-83	1,000
Cobalt-60m	1,000	Bromine-84	1,000
Cobalt-60	1	Krypton-74	1,000
Cobalt-61	1,000	Krypton-76	1,000
Cobalt-62m	1,000	Krypton-77	1,000

*To convert μ Ci to kBq, multiply the μ Ci value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Krypton-79	1,000	Technetium-93m	1,000
Krypton-81	1,000	Technetium-93	1,000
Krypton-83m	1,000	Technetium-94m	1,000
Krypton-85m	1,000	Technetium-94	1,000
Krypton-85	1,000	Technetium-96m	1,000
Krypton-87	1,000	Technetium-96	100
Krypton-88	1,000	Technetium-97m	100
Rubidium-79	1,000	Technetium-97	1,000
Rubidium-81m	1,000	Technetium-98	10
Rubidium-81	1,000	Technetium-99m	1,000
Rubidium-82m	1,000	Technetium-99	100
Rubidium-83	100	Technetium-101	1,000
Rubidium-84	100	Technetium-104	1,000
Rubidium-86	100	Ruthenium-94	1,000
Rubidium-87	100	Ruthenium-97	1,000
Rubidium-88	1,000	Ruthenium-103	100
Rubidium-89	1,000	Ruthenium-105	1,000
Strontium-80	100	Ruthenium-106	1
Strontium-81	1,000	Rhodium-99m	1,000
Strontium-83	100	Rhodium-99	100
Strontium-85m	1,000	Rhodium-100	100
Strontium-85	100	Rhodium-101m	1,000
Strontium-87m	1,000	Rhodium-101	10
Strontium-89	10	Rhodium-102m	10
Strontium-90	0.1	Rhodium-102	10
Strontium-91	100	Rhodium-103m	1,000
Strontium-92	100	Rhodium-105	100
Yttrium-86m	1,000	Rhodium-106m	1,000
Yttrium-86	100	Rhodium-107	1,000
Yttrium-87	100	Palladium-100	100
Yttrium-88	10	Palladium-101	1,000
Yttrium-90m	1,000	Palladium-103	100
Yttrium-90	10	Palladium-107	10
Yttrium-91m	1,000	Palladium-109	100
Yttrium-91	10	Silver-102	1,000
Yttrium-92	100	Silver-103	1,000
Yttrium-93	100	Silver-104m	1,000
Yttrium-94	1,000	Silver-104	1,000
Yttrium-95	1,000	Silver-105	100
Zirconium-86	100	Silver-106m	100
Zirconium-88	10	Silver-106	1,000
Zirconium-89	100	Silver-108m	1
Zirconium-93	1	Silver-110m	10
Zirconium-95	10	Silver-111	100
Zirconium-97	100	Silver-112	100
Niobium-88	1,000	Silver-115	1,000
Niobium-89m (66 min)	1,000	Cadmium-104	1,000
Niobium-89 (122 min)	1,000	Cadmium-107	1,000
Niobium-90	100	Cadmium-109	1
Niobium-93m	10	Cadmium-113m	0.1
Niobium-94	1	Cadmium-113	100
Niobium-95m	100	Cadmium-115m	10
Niobium-95	100	Cadmium-115	100
Niobium-96	100	Cadmium-117m	1,000
Niobium-97	1,000	Cadmium-117	1,000
Niobium-98	1,000	Indium-109	1,000
Molybdenum-90	100	Indium-110m	
Molybdenum-93m	100	(69.1m)	1,000
Molybdenum-93	10	Indium-110	
Molybdenum-99	100	(4.9h)	1,000
Molybdenum-101	1,000	Indium-111	100
		Indium-112	1,000
		Indium-113m	1,000

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Indium-114m	10	Iodine-123	100
Indium-115m	1,000	Iodine-124	10
Indium-115	100	Iodine-125	1
Indium-116m	1,000	Iodine-126	1
Indium-117m	1,000	Iodine-128	1,000
Indium-117	1,000	Iodine-129	1
Indium-119m	1,000	Iodine-130	10
Tin-110	100	Iodine-131	1
Tin-111	1,000	Iodine-132m	100
Tin-113	100	Iodine-132	100
Tin-117m	100	Iodine-133	10
Tin-119m	100	Iodine-134	1,000
Tin-121m	100	Iodine-135	100
Tin-121	1,000	Xenon-120	1,000
Tin-123m	1,000	Xenon-121	1,000
Tin-123	10	Xenon-122	1,000
Tin-125	10	Xenon-123	1,000
Tin-126	10	Xenon-125	1,000
Tin-127	1,000	Xenon-127	1,000
Tin-128	1,000	Xenon-129m	1,000
Antimony-115	1,000	Xenon-131m	1,000
Antimony-116m	1,000	Xenon-133m	1,000
Antimony-116	1,000	Xenon-133	1,000
Antimony-117	1,000	Xenon-135m	1,000
Antimony-118m	1,000	Xenon-135	1,000
Antimony-119	1,000	Xenon-138	1,000
Antimony-120 (16m)	1,000	Cesium-125	1,000
Antimony-120 (5.76d)	100	Cesium-127	1,000
Antimony-122	100	Cesium-129	1,000
Antimony-124m	1,000	Cesium-130	1,000
Antimony-124	10	Cesium-131	1,000
Antimony-125	100	Cesium-132	100
Antimony-126m	1,000	Cesium-134m	1,000
Antimony-126	100	Cesium-134	10
Antimony-127	100	Cesium-135m	1,000
Antimony-128 (10.4m)	1,000	Cesium-135	100
Antimony-128 (9.01h)	100	Cesium-136	10
Antimony-129	100	Cesium-137	10
Antimony-130	1,000	Cesium-138	1,000
Antimony-131	1,000	Barium-126	1,000
Tellurium-116	1,000	Barium-128	100
Tellurium-121m	10	Barium-131m	1,000
Tellurium-121	100	Barium-131	100
Tellurium-123m	10	Barium-133m	100
Tellurium-123	100	Barium-133	100
Tellurium-125m	10	Barium-135m	100
Tellurium-127m	10	Barium-139	1,000
Tellurium-127	1,000	Barium-140	100
Tellurium-129m	10	Barium-141	1,000
Tellurium-129	1,000	Barium-142	1,000
Tellurium-131m	10	Lanthanum-131	1,000
Tellurium-131	100	Lanthanum-132	100
Tellurium-132	10	Lanthanum-135	1,000
Tellurium-133m	100	Lanthanum-137	10
Tellurium-133	1,000	Lanthanum-138	100
Tellurium-134	1,000	Lanthanum-140	100
Iodine-120m	1,000	Lanthanum-141	100
Iodine-120	100	Lanthanum-142	1,000
Iodine-121	1,000	Lanthanum-143	1,000
		Cerium-134	100
		Cerium-135	100
		Cerium-137m	100
		Cerium-137	1,000

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Cerium-139	100	Gadolinium-149	100
Cerium-141	100	Gadolinium-151	10
Cerium-143	100	Gadolinium-152	100
Cerium-144	1	Gadolinium-153	10
Praseodymium-136	1,000	Gadolinium-159	100
Praseodymium-137	1,000	Terbium-147	1,000
Praseodymium-138m	1,000	Terbium-149	100
Praseodymium-139	1,000	Terbium-150	1,000
Praseodymium-142m	1,000	Terbium-151	100
Praseodymium-142	100	Terbium-153	1,000
Praseodymium-143	100	Terbium-154	100
Praseodymium-144	1,000	Terbium-155	1,000
Praseodymium-145	100	Terbium-156m	
Praseodymium-147	1,000	(5.0h)	1,000
Neodymium-136	1,000	Terbium-156m	
Neodymium-138	100	(24.4h)	1,000
Neodymium-139m	1,000	Terbium-156	100
Neodymium-139	1,000	Terbium-157	10
Neodymium-141	1,000	Terbium-158	1
Neodymium-147	100	Terbium-160	10
Neodymium-149	1,000	Terbium-161	100
Neodymium-151	1,000	Dysprosium-155	1,000
Promethium-141	1,000	Dysprosium-157	1,000
Promethium-143	100	Dysprosium-159	100
Promethium-144	10	Dysprosium-165	1,000
Promethium-145	10	Dysprosium-166	100
Promethium-146	1	Holmium-155	1,000
Promethium-147	10	Holmium-157	1,000
Promethium-148m	10	Holmium-159	1,000
Promethium-148	10	Holmium-161	1,000
Promethium-149	100	Holmium-162m	1,000
Promethium-150	1,000	Holmium-162	1,000
Promethium-151	100	Holmium-164m	1,000
Samarium-141m	1,000	Holmium-164	1,000
Samarium-141	1,000	Holmium-166m	1
Samarium-142	1,000	Holmium-166	100
Samarium-145	100	Holmium-167	1,000
Samarium-146	1	Erbium-161	1,000
Samarium-147	100	Erbium-165	1,000
Samarium-151	10	Erbium-169	100
Samarium-153	100	Erbium-171	100
Samarium-155	1,000	Erbium-172	100
Samarium-156	1,000	Thulium-162	1,000
Europium-145	100	Thulium-166	100
Europium-146	100	Thulium-167	100
Europium-147	100	Thulium-170	10
Europium-148	10	Thulium-171	10
Europium-149	100	Thulium-172	100
Europium-150		Thulium-173	100
(12.62h)	100	Thulium-175	1,000
Europium-150		Ytterbium-162	1,000
(34.2y)	1	Ytterbium-166	100
Europium-152m	100	Ytterbium-167	1,000
Europium-152	1	Ytterbium-169	100
Europium-154	1	Ytterbium-175	100
Europium-155	10	Ytterbium-177	1,000
Europium-156	100	Ytterbium-178	1,000
Europium-157	100	Lutetium-169	100
Europium-158	1,000	Lutetium-170	100
Gadolinium-145	1,000	Lutetium-171	100
Gadolinium-146	10	Lutetium-172	100
Gadolinium-147	100	Lutetium-173	10
Gadolinium-148	0.001	Lutetium-174m	10

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Lutetium-174	10	Osmium-185	100
Lutetium-176m	1,000	Osmium-189m	1,000
Lutetium-176	100	Osmium-191m	1,000
Lutetium-177m	10	Osmium-191	100
Lutetium-177	100	Osmium-193	100
Lutetium-178m	1,000	Osmium-194	1
Lutetium-178	1,000	Iridium-182	1,000
Lutetium-179	1,000	Iridium-184	1,000
Hafnium-170	100	Iridium-185	1,000
Hafnium-172	1	Iridium-186	100
Hafnium-173	1,000	Iridium-187	1,000
Hafnium-175	100	Iridium-188	100
Hafnium-177m	1,000	Iridium-189	100
Hafnium-178m	0.1	Iridium-190m	1,000
Hafnium-179m	10	Iridium-190	100
Hafnium-180m	1,000	Iridium-192m	
Hafnium-181	10	(1.4m)	10
Hafnium-182m	1,000	Iridium-192	
Hafnium-182	0.1	(73.8d)	1
Hafnium-183	1,000	Iridium-194m	10
Hafnium-184	100	Iridium-194	100
Tantalum-172	1,000	Iridium-195m	1,000
Tantalum-173	1,000	Iridium-195	1,000
Tantalum-174	1,000	Platinum-186	1,000
Tantalum-175	1,000	Platinum-188	100
Tantalum-176	100	Platinum-189	1,000
Tantalum-177	1,000	Platinum-191	100
Tantalum-178	1,000	Platinum-193m	100
Tantalum-179	100	Platinum-193	1,000
Tantalum-180m	1,000	Platinum-195m	100
Tantalum-180	100	Platinum-197m	1,000
Tantalum-182m	1,000	Platinum-197	100
Tantalum-182	10	Platinum-199	1,000
Tantalum-183	100	Platinum-200	100
Tantalum-184	100	Gold-193	1,000
Tantalum-185	1,000	Gold-194	100
Tantalum-186	1,000	Gold-195	10
Tungsten-176	1,000	Gold-198m	100
Tungsten-177	1,000	Gold-198	100
Tungsten-178	1,000	Gold-199	100
Tungsten-179	1,000	Gold-200m	100
Tungsten-181	1,000	Gold-200	1,000
Tungsten-185	100	Gold-201	1,000
Tungsten-187	100	Mercury-193m	100
Tungsten-188	10	Mercury-193	1,000
Rhenium-177	1,000	Mercury-194	1
Rhenium-178	1,000	Mercury-195m	100
Rhenium-181	1,000	Mercury-195	1,000
Rhenium-182		Mercury-197m	100
(12.7h)	1,000	Mercury-197	1,000
Rhenium-182		Mercury-199m	1,000
(64.0h)	100	Mercury-203	100
Rhenium-184m	10	Thallium-194m	1,000
Rhenium-184	100	Thallium-194	1,000
Rhenium-186m	10	Thallium-195	1,000
Rhenium-186	100	Thallium-197	1,000
Rhenium-187	1,000	Thallium-198m	1,000
Rhenium-188m	1,000	Thallium-198	1,000
Rhenium-188	100	Thallium-199	1,000
Rhenium-189	100	Thallium-201	1,000
Osmium-180	1,000	Thallium-200	1,000
Osmium-181	1,000	Thallium-202	100
Osmium-182	100	Thallium-204	100

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Lead-195m	1,000	Uranium-230	0.01
Lead-198	1,000	Uranium-231	100
Lead-199	1,000	Uranium-232	0.001
Lead-200	100	Uranium-233	0.001
Lead-201	1,000	Uranium-234	0.001
Lead-202m	1,000	Uranium-235	0.001
Lead-202	10	Uranium-236	0.001
Lead-203	1,000	Uranium-237	100
Lead-205	100	Uranium-238	100
Lead-209	1,000	Uranium-239	1,000
Lead-210	0.01	Uranium-240	100
Lead-211	100	Uranium-natural	100
Lead-212	1	Neptunium-232	100
Lead-214	100	Neptunium-233	1,000
Bismuth-200	1,000	Neptunium-234	100
Bismuth-201	1,000	Neptunium-235	100
Bismuth-202	1,000	Neptunium-236 (1.15E + 5)	0.001
Bismuth-203	100	Neptunium-236 (22.5h)	1
Bismuth-205	100	Neptunium-237	0.001
Bismuth-206	100	Neptunium-238	10
Bismuth-207	10	Neptunium-239	100
Bismuth-210m	0.1	Neptunium-240	1,000
Bismuth-210	1	Plutonium-234	10
Bismuth-212	10	Plutonium-235	1,000
Bismuth-213	10	Plutonium-236	0.001
Bismuth-214	100	Plutonium-237	100
Polonium-203	1,000	Plutonium-238	0.001
Polonium-205	1,000	Plutonium-239	0.001
Polonium-207	1,000	Plutonium-240	0.001
Polonium-210	0.1	Plutonium-241	0.01
Astatine-207	100	Plutonium-242	0.001
Astatine-211	10	Plutonium-243	1,000
Radon-220	1	Plutonium-244	0.001
Radon-222	1	Plutonium-245	100
Francium-222	100	Americium-237	1,000
Francium-223	100	Americium-238	100
Radium-223	0.1	Americium-239	1,000
Radium-224	0.1	Americium-240	100
Radium-225	0.1	Americium-241	0.001
Radium-226	0.1	Americium-242m	0.001
Radium-227	1,000	Americium-242	10
Radium-228	0.1	Americium-243	0.001
Actinium-224	1	Americium-244m	100
Actinium-225	0.01	Americium-244	10
Actinium-226	0.1	Americium-245	1,000
Actinium-227	0.001	Americium-246m	1,000
Actinium-228	1	Americium-246	1,000
Thorium-226	10	Curium-238	100
Thorium-227	0.01	Curium-240	0.1
Thorium-228	0.001	Curium-241	1
Thorium-229	0.001	Curium-242	0.01
Thorium-230	0.001	Curium-243	0.001
Thorium-231	100	Curium-244	0.001
Thorium-232	100	Curium-245	0.001
Thorium-234	10	Curium-246	0.001
Thorium-natural	100	Curium-247	0.001
Protactinium-227	10	Curium-248	0.001
Protactinium-228	1	Curium-249	1,000
Protactinium-230	0.1	Berkelium-245	100
Protactinium-231	0.001	Berkelium-246	100
Protactinium-232	1	Berkelium-247	0.001
Protactinium-233	100		
Protactinium-234	100		

*To convert μCi to kBq, multiply the μCi value by 37.

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Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Berkelium-249	0.1	Fermium-254	10
Berkelium-250	10	Fermium-255	1
Californium-244	100	Fermium-257	0.01
Californium-246	1	Mendelevium-257	10
Californium-248	0.01	Mendelevium-258	0.01
Californium-249	0.001	Any alpha-emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	0.001
Californium-250	0.001		
Californium-251	0.001		
Californium-252	0.001		
Californium-253	0.1		
Californium-254	0.001		
Einsteinium-250	100		
Einsteinium-251	100	Any radionuclide other than alpha-emitting radionuclides not listed above, or mixtures of beta emitters of unknown composition	0.01
Einsteinium-253	0.1		
Einsteinium-254m	1		
Einsteinium-254	0.01		
Fermium-252	1		
Fermium-253	1		

* To convert μCi to kBq , multiply the μCi value by 37.

NOTE: For purposes of R12-1-428(E), R12-1-432(A), and R12-1-443(A) where there is involved a combination of radionuclides in known amounts, the limit for the combination shall be derived as follows: determine, for each radionuclide in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific radionuclide when not in combination. The sum of such ratios for all radionuclides in the combination may not exceed "1" -- that is, unity.

¹ The quantities listed above were derived by taking 1/10 of the most restrictive ALI listed in Table I, Columns 1 and 2, of Appendix B to Article 4, rounding to the nearest factor of 10, and constraining the values listed between 37 Bq and 37 MBq (0.001 and 1,000 μCi). Values of 3.7 MBq (100 μCi) have been assigned for radionuclides having a radioactive half-life in excess of E+9 years, except rhenium, 37 MBq (1,000 μCi), to take into account their low specific activity.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).

APPENDIX D. CLASSIFICATION AND CHARACTERISTICS OF LOW-LEVEL RADIOACTIVE WASTE

I. Classification of Radioactive Waste for Land Disposal

- a) Considerations. Determination of the classification of radioactive waste involves two considerations. First, consideration must be given to the concentration of long-lived radionuclides (and their shorter-lived precursors) whose potential hazard will persist long after such precautions as institutional controls, improved waste form, and deeper disposal have ceased to be effective. These precautions delay the time when long-lived radio nuclides could cause exposures. In addition, the magnitude of the potential dose is limited by the concentration and availability of the radionuclide at the time of exposure. Second, consideration must be given to the concentration of shorter-lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.
- b) Classes of waste.
 - 1) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in Section II(a). If Class A waste also meets the stability requirements set forth in Section II(b), it is not necessary to segregate the waste for disposal.
 - 2) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in Section II.
 - 3) Class C waste is waste that not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in Section II.
- c) Classification determined by long-lived radionuclides. If the radioactive waste contains only radionuclides listed in Table I, classification shall be determined as follows:
 - 1) If the concentration does not exceed 0.1 times the value in Table I, the waste is Class A.
 - 2) If the concentration exceeds 0.1 times the value in Table I but does not exceed the value in Table I, the waste is Class C.
 - 3) If the concentration exceeds the value in Table I, the waste is not generally acceptable for land disposal.
 - 4) For wastes containing mixtures of radionuclides listed in Table I, the total concentration shall be determined by the sum of fractions rule described in Section I(g).

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**TABLE I
Concentration**

Radionuclide	curie/cubic meter ^a	nanocuries/gram ^b
C-14	8	
C-14 in activated metal	80	
Ni-59 in activated metal	220	
Nb-94 in activated metal	0.2	
Tc-99	3	
I-129	0.08	
Alpha-emitting transuranic radionuclides with half-life greater than five years	100	
Pu-241		3,500
Cm-242		20,000
Ra-226		100

^aTo convert the Ci/m³ values to gigabecquerel (GBq) per cubic meter, multiply the Ci/m³ value by 37.

^bTo convert the nCi/g values to becquerel (Bq) per gram, multiply the nCi/g value by 37.

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| <p>d) Classification determined by short-lived radionuclides. If the waste does not contain any of the radionuclides listed in Table I, classification shall be determined based on the concentrations shown in Table II. However, as specified in Section I(f), if radioactive waste does not contain any nuclides listed in either Table I or II, it is Class A.</p> <ol style="list-style-type: none"> 1) If the concentration does not exceed the value in Column 1, the waste is Class A. 2) If the concentration exceeds the value in Column 1 but does not exceed the value in Column 2, the waste is Class B. | <ol style="list-style-type: none"> 3) If the concentration exceeds the value in Column 2 but does not exceed the value in Column 3, the waste is Class C. 4) If the concentration exceeds the value in Column 3, the waste is not generally acceptable for near-surface disposal. 5) For wastes containing mixtures of the radionuclides listed in Table II, the total concentration shall be determined by the sum of fractions rule described in Section I(g). |
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TABLE II

Radionuclide	Concentration, Column 1	curie/cubic meter*	
		Column 2	Column 3
Total of all radionuclides with less than 5-year half-life	700	*	*
H-3	40	*	*
Co-60	700	*	*
Ni-63	3.5	70	700
Ni-63 in activated metal	35	700	7000
Sr-90	0.04	150	7000
Cs-137	1	44	4600

*AGENCY NOTE: To convert the Ci/m³ value to gigabecquerel (GBq) per cubic meter, multiply the Ci/m³ value by 37. There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other radionuclides in Table II determine the waste to be Class C independent of these radionuclides.

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| <p>e) Classification determined by both long- and short-lived radionuclides. If the radioactive waste contains a mixture of radionuclides, some of which are listed in Table I and some of which are listed in Table II, classification shall be determined as follows:</p> <ol style="list-style-type: none"> 1) If the concentration of a radionuclide listed in Table I is less than 0.1 times the value listed in Table I, the class shall be that determined by the concentration of radionuclides listed in Table II. 2) If the concentration of a radionuclide listed in Table I exceeds 0.1 times the value listed in Table I, but does not exceed the value in Table II, the waste shall be Class C, provided the concentration of radionu- | <p>clides listed in Table II does not exceed the value shown in Column 3 of Table II.</p> <ol style="list-style-type: none"> f) Classification of wastes with radionuclides other than those listed in Tables I and II. If the waste does not contain any radionuclides listed in either Table I or II, it is Class A. g) The sum of the fractions rule for mixtures of radionuclides. For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each radionuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits shall all be taken from the same column of the same table. The sum of the fractions for the column shall be less than 1.0 if the |
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waste class is to be determined by that column. Example: A waste contains Sr-90 in a concentration of 1.85 TBq/m³ (50 Ci/m³) and Cs-137 in a concentration of 814 GBq/m³ (22 Ci/m³). Since the concentrations both exceed the values in Column 1, Table II, they shall be compared to Column 2 values. For Sr-90 fraction, 50/150 = 0.33, for Cs-137 fraction, 22/44 = 0.5; the sum of the fractions = 0.83. Since the sum is less than 1.0, the waste is Class B.

- h) Determination of concentrations in wastes. The concentration of a radionuclide may be determined by indirect methods such as use of scaling factors which relate the inferred concentration of one radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurements. The concentration of a radionuclide may be averaged over the volume of the waste, or weight of the waste if the units are expressed as becquerel (nanocurie) per gram.

II. Radioactive Waste Characteristics

- a) The following are minimum requirements for all classes of waste and are intended to facilitate handling and provide protection of health and safety of personnel at the disposal site.
- 1) Wastes shall be packaged in conformance with the conditions of the license issued to the site operator to which the waste will be shipped. Where the conditions of the site license are more restrictive than the provisions of Article 4, the site license conditions shall govern.
 - 2) Wastes shall not be packaged for disposal in cardboard or fiberboard boxes.
 - 3) Liquid waste shall be packaged in sufficient absorbent material to absorb twice the volume of the liquid.
 - 4) Solid waste containing liquid shall contain as little free-standing and non-corrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume.
 - 5) Waste shall not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures, or of explosive reaction with water.
 - 6) Waste shall not contain, or be capable of generating, quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste. This does not apply to radioactive gaseous waste packaged in accordance with Section II(a)(8).

- 7) Waste shall not be pyrophoric. Pyrophoric materials contained in wastes shall be treated, prepared, and packaged to be nonflammable *****

- 8) Wastes in a gaseous form shall be packaged at an absolute pressure that does not exceed 1.5 atmospheres at 20° C. Total activity shall not exceed 3.7 TBq (100 Ci) per container.

- 9) Wastes containing hazardous, biological, pathogenic, or infectious material shall be treated to reduce to the maximum extent practicable the potential hazard from the non-radiological materials.

- b) The following requirements are intended to provide stability of the waste. Stability is intended to ensure that the waste does not degrade and affect overall stability of the site through slumping, collapse, or other failure of the disposal unit and thereby lead to water infiltration. Stability is also a factor in limiting exposure to an inadvertent intruder, since it provides a recognizable and nondispersible waste.

- 1) Waste shall have structural stability. A structurally stable waste form will generally maintain its physical dimensions and its form, under the expected disposal conditions such as weight of overburden and compaction equipment, the presence of moisture, and microbial activity, and internal factors such as radiation effects and chemical changes. Structural stability can be provided by the waste form itself, processing the waste to a stable form, or placing the waste in a disposal container or structure that provides stability after disposal.

- 2) Notwithstanding the provisions in Section II(a)(3) and (4), liquid wastes, or wastes containing liquid, shall be converted into a form that contains as little free-standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume of the waste when the waste is in a disposal container designed to ensure stability, or 0.5% of the volume of the waste for waste processed to a stable form.

- 3) Void spaces within the waste and between the waste and its package shall be reduced to the extent practicable.

III. Labeling

Each package of waste shall be clearly labeled to identify whether it is Class A, Class B, or Class C waste, in accordance with Section I.

*****See (A)(4) of these regulations for definition of pyrophoric.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).

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APPENDIX E. QUANTITIES FOR USE WITH DECOMMISSIONING

Material	Microcurie	Material	Microcurie
Americium-241	0.01	Iodine-134	10
Antimony-122	100	Iodine-135	10
Antimony-124	10	Iridium-192	10
Antimony-125	10	Iridium-194	100
Arsenic-73	100	Iron-55	100
Arsenic-74	10	Iron-59	10
Arsenic-76	10	Krypton-85	100
Arsenic-77	100	Krypton-87	10
Barium-131	10	Lanthanum-140	10
Barium-133	10	Lutetium-177	100
Barium-140	10	Manganese-52	10
Bismuth-210	1	Manganese-54	10
Bromine-82	10	Manganese-56	10
Cadmium-109	10	Mercury-197m	100
Cadmium-115m	10	Mercury-197	100
Cadmium-115	100	Mercury-203	10
Calcium-45	10	Molybdenum-99	100
Calcium-47	10	Neodymium-147	100
Carbon-14	100	Neodymium-149	100
Cerium-141	100	Nickel-59	100
Cerium-143	100	Nickel-63	10
Cerium-144	1	Nickel-65	100
Cesium-131	1,000	Niobium-93m	10
Cesium-134m	100	Niobium-95	10
Cesium-134	1	Niobium-97	10
Cesium-135	10	Osmium-185	10
Cesium-136	10	Osmium-191m	100
Cesium-137	10	Osmium-191	100
Chlorine-36	10	Osmium-193	100
Chlorine-38	10	Palladium-103	100
Chromium-51	1,000	Palladium-109	100
Cobalt-58m	10	Phosphorus-32	10
Cobalt-58	10	Platinum-191	100
Cobalt-60	1	Platinum-193m	100
Copper-64	100	Platinum-193	100
Dysprosium-165	10	Platinum-197m	100
Dysprosium-166	100	Platinum-197	100
Erbium-169	100	Plutonium-239	0.01
Erbium-171	100	Polonium-210	0.1
Europium-152 (9.2 h)	100	Potassium-42	10
Europium-152 (13 yr)	1	Praseodymium-142	100
Europium-154	1	Praseodymium-143	100
Europium-155	10	Promethium-147	10
Fluorine-18	1,000	Promethium-149	10
Gadolinium-153	10	Radium-226	0.01
Gadolinium-159	100	Rhenium-186	100
Gallium-72	10	Rhenium-188	100
Germanium-71	100	Rhodium-103m	100
Gold-198	100	Rhodium-105	100
Gold-199	100	Rubidium-86	10
Hafnium-181	10	Rubidium-87	10
Holmium-166	100	Ruthenium-97	100
Hydrogen-3	1,000	Ruthenium-103	10
Indium-113m	100	Ruthenium-105	10
Indium-114m	10	Ruthenium-106	1
Indium-115m	100	Samarium-151	10
Indium-115	10	Samarium-153	100
Iodine-125	1	Scandium-46	10
Iodine-126	1	Scandium-47	100
Iodine-129	0.1	Scandium-48	10
Iodine-131	1	Selenium-75	10
Iodine-132	10	Silicon-31	100
Iodine-133	1	Silver-105	10

* To convert μCi to kBq , multiply the μCi value by 37.

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Material	Microcurie	Material	Microcurie
Silver-110m	1	Tungsten-181	10
Silver-111	100	Tungsten-185	10
Sodium-22	1	Tungsten-187	100
Sodium-24	10	Uranium (natural)**	100
Strontium-85	10	Uranium-233	0.01
Strontium-89	1	Uranium-234	0.01
Strontium-90	0.1	Uranium-235	0.01
Strontium-91	10	Vanadium-48	10
Strontium-92	10	Xenon-131m	1,000
Sulfur-35	100	Xenon-133	100
Tantalum-182	10	Xenon-135	100
Technetium-96	10	Ytterbium-175	100
Technetium-97m	100	Yttrium-90	10
Technetium-97	100	Yttrium-91	10
Technetium-99m	100	Yttrium-92	100
Technetium-99	10	Yttrium-93	100
Tellurium-125m	10	Zinc-65	10
Tellurium-127m	10	Zinc-69m	100
Tellurium-127	100	Zinc-69	1,000
Tellurium-129m	10	Zirconium-93	10
Tellurium-129	100	Zirconium-95	10
Tellurium-131m	10	Zirconium-97	10
Tellurium-132	10	Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	0.01
Terbium-160	10	Any radionuclide other than alpha emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition	0.1
Thallium-200	100		
Thallium-201	100		
Thallium-202	100		
Thallium-204	10		
Thorium (natural)**	100		
Thulium-170	10		
Thulium-171	10		
Tin-113	10		
Tin-125	10		

*To convert μCi to kBq , multiply the μCi value by 37.

** Based on alpha disintegration rate of Th-232, Th-230 and their daughter products.

*** Based on alpha disintegration rate of U-238, U-234, and U-235.

NOTE: Where there is involved a combination of isotopes in known amounts, the limit for the combination should be derived as follows: Determine, for each isotope in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific isotope when not in combination. The sum of such ratios for all the isotopes in the combination may not exceed "1" - that is, unity.

Historical Note

Adopted effective August 10, 1994 (Supp. 94-3).

ARRA-6. Repealed

Historical Note

Adopted effective February 25, 1985 (Supp. 85-1). Form repealed, new form adopted in Article 10 effective August 10, 1994 (Supp. 94-3).

ARRA-7. Repealed

Historical Note

Adopted effective February 25, 1985 (Supp. 85-1). Repealed effective August 10, 1994 (Supp. 94-3).

ARRA-8. Repealed

Historical Note

Adopted effective February 25, 1985 (Supp. 85-1). Repealed effective August 10, 1994 (Supp. 94-3).

ARTICLE 5. SEALED SOURCE INDUSTRIAL RADIOGRAPHY

R12-1-501. Definitions

"Access panel" means any panel that is designed to be removed or opened for maintenance or service purposes, opened using tools, and used to provide access to the interior of the cabinet x-ray unit.

"Annual refresher safety training" means a review conducted or provided by the licensee for its employees on radiation safety aspects of industrial radiography. The review shall include, as applicable, the results of internal inspections, new procedures or equipment, new or revised state rules, accidents or errors that have occurred, and provide opportunities for employees to ask safety questions.

"Aperture" means any opening in the outside surface of the cabinet x-ray unit, other than a port, which remains open during generation of x-radiation.

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“Associated equipment” means equipment used in conjunction with a radiographic exposure device that drives, guides, or comes in contact with the source.

“Certifying entity” means an independent certifying organization that complies with the requirements in Appendix A of this Article, or requirements of the NRC or another Agreement State, that are equivalent to the requirements in parts II and III of Appendix A.

“Collimator” means a radiation shield that is placed on the end of the guide tube or directly onto a radiographic exposure device to restrict the size of the radiation beam when the sealed source is positioned to make a radiographic exposure.

“Control (drive) cable” means the cable that is connected to the source assembly and used to drive the source to and from the exposure location.

“Control (drive) mechanism” means a device that enables the source assembly to be moved to and from the exposure device.

“Control tube” means a protective sheath for guiding the control cable. The control tube connects the control drive mechanism to the radiographic exposure device.

“Door” means any barrier that is designed to be movable or opened for routine operation purposes, not opened using tools, and used to provide access to the interior of the cabinet x-ray unit.

“Exposure head” means a device that places the gamma radiography sealed source in a selected working position.

“Ground fault” means an accidental electrical grounding of an electrical conductor.

“Guide tube (projection sheath)” means a flexible or rigid tube (i.e., “J” tube) for guiding the source assembly and the attached control cable from the exposure device to the exposure head. The guide tube may also include the connections necessary for attachment to the exposure device and to the exposure head.

“Hands-on experience” means accumulation of knowledge or skill in any area relevant to radiography.

“Independent certifying organization” means an independent organization that meets all of the requirements in Appendix A.

“Lay-barge radiography” means industrial radiography performed on any water vessel used for laying pipe.

“Port” means any opening in the outside surface of the cabinet x-ray unit that is designed to remain open, during generation of x-rays, for conveying material being irradiated into and out of the cabinet, or for partial insertion of an object for irradiation whose dimensions do not permit complete insertion into the cabinet x-ray unit.

“Practical examination” means a demonstration, through practical application of safety rules and principles of industrial radiography, including use of all radiography equipment and knowledge of radiography procedures.

“Radiographer certification” means written approval received from a certifying entity stating that an individual has satisfactorily met certain established radiation safety, testing, and experience criteria.

“Radiographic exposure device” means any x-ray machine used for purposes of making an industrial radiographic exposure or a device that contains a sealed source, and the sealed source or its shielding may be moved or otherwise changed from a shielded to an unshielded position for purposes of making an industrial radiographic exposure.

“Radiographic operations” means all activities associated with the presence of radiation sources in a radiographic exposure device during use of the device or transport (except when the device is being transported by a common or contract carrier). This includes performing surveys to confirm the adequacy of boundaries, setting up equipment, and conducting any activity inside restricted area boundaries.

“S-tube” means a tube through which a radioactive source travels when the source is inside a radiographic exposure device.

“Source assembly” means an assembly that consists of a sealed source and a connector that attaches the source to a control cable. The source assembly may also include a stop ball used to secure the source in the shielded position.

“Underwater radiography” means industrial radiography performed when a radiographic exposure device is beneath the surface of water.

Historical Note

Former Rule Section E.1; Former Section R12-1-501 repealed, new Section R12-1-501 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-501 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-502. License Requirements

- A.** The Agency shall review an application for a specific license for the use of radioactive material in industrial radiography and approve the license if an applicant meets all of the following requirements:
1. The applicant satisfies the general requirements in R12-1-309 and any special requirements contained in this Article; and
 2. The applicant submits a program for training radiographers and radiographers’ assistants that complies with R12-1-543, except that:
 - a. After the effective date of this Section, an applicant is not required to describe its initial training and examination program for radiographers;
 - b. An applicant shall affirm that an individual who is acting as an industrial radiographer is certified in radiation safety by a certifying organization, as required in R12-1-543, before permitting the individual to act as a radiographer. This affirmation substitutes for a description of the applicant’s initial training and examination program for radiographers in the subjects outlined in R12-1-543(G); and
 - c. An applicant shall submit procedures for verifying and documenting the certification status of each radiographer and for ensuring that the certification remains valid.
- B.** The applicant shall submit written operating and emergency procedures as prescribed in R12-1-522.
- C.** The applicant shall submit a description of a program for review of job performance of each radiographer and radiographers’ assistant at intervals that do not exceed six months as prescribed in R12-1-543(E).
- D.** The applicant shall submit a description of the applicant’s overall organizational structure as it applies to radiation safety

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responsibilities in industrial radiography, including specified delegation of authority and responsibility.

- E. The applicant shall submit a list of the qualifications of each individual designated as an RSO under R12-1-512 and indicate which designee is responsible for ensuring that the licensee's radiation safety program is implemented in accordance with approved procedures.
- F. If an applicant intends to perform leak testing on any sealed source or exposure device that contains depleted uranium (DU) shielding, the applicant shall submit a description of the procedures for performing the leak testing and the qualifications of each person authorized to perform leak testing. If the applicant intends to analyze its own wipe samples, the application shall include a description of the procedures to be followed. The description shall include the:
 1. Instruments to be used,
 2. Methods of performing the analysis, and
 3. Relevant experience of the person who will analyze the wipe samples.
- G. If the applicant intends to perform "in-house" calibrations of survey instruments, the applicant shall describe each calibration method to be used and the relevant experience of each person who will perform a calibration. A licensee shall perform all calibrations according to the procedures prescribed in R12-1-504.
- H. The applicant shall identify and describe the location of all field stations and permanent radiographic installations.
- I. The applicant shall identify each location where records required by this Chapter will be maintained.

Historical Note

Former Rule Section E.2; Former Section R12-1-502 repealed, new Section R12-1-502 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-502 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Section repealed, new Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-503. Performance Requirements for Equipment

- A. A licensee shall ensure that equipment used in industrial radiographic operations meets the following minimum criteria:
 1. Each radiographic exposure device, source assembly or sealed source, and all associated equipment meet the requirements in American National Standards Institute, N432-1980 "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography" (published as NBS Handbook 136, issued January 1981) by the American National Standards Institute, which is incorporated by reference and on file with the Agency. This incorporation by reference contains no future editions or amendments. This publication may be purchased from the American National Standards Institute, Inc., 25 West 43rd Street, New York, New York 10036 Telephone (212) 642-4900. A copy of the document is also on file at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html; or
 2. An engineering safety analysis demonstrates the applicability of previously performed testing on similar individual radiography equipment components. Based on a review of the analysis, the Agency may find that previously performed testing can be substituted for testing of the component under the standards in subsection (A)(1).
- B. In addition to the requirements in subsection (A), the following requirements apply to each radiographic exposure device, source changer, source assembly, and sealed source:
 1. A licensee shall ensure that each radiographic exposure device has attached to it a durable, legible, and clearly visible label bearing:
 - a. The chemical symbol and mass number of the radionuclide in the device;
 - b. The activity of the source and the date on which this activity was last measured;
 - c. The model (or product code) and serial number of the sealed source;
 - d. The manufacturer's description of the sealed source; and
 - e. The licensee's name, address, and telephone number.
 2. A licensee shall ensure that each radiographic exposure device intended for use as a Type B transport container meets the applicable requirements of 10 CFR 71, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 3. A licensee shall not modify any radiographic exposure device, source changer, source assembly, or associated equipment, unless the design of the replacement component, including source holder, source assembly, controls, or guide tubes is consistent with and does not compromise the design safety features of the system.
- C. In addition to the requirements in subsections (A) and (B), the following requirements apply to each radiographic exposure device, source assembly, and associated equipment that allows the source to be moved out of the device for radiographic operations or to a source changer:
 1. The license shall ensure that the coupling between the source assembly and the control cable is designed so that the source assembly does not become disconnected if it is positioned outside of the guide tube and is constructed so that an unintentional disconnect will not occur under normal and reasonably foreseeable abnormal conditions;
 2. The device automatically secures the source assembly if it is retracted into the fully shielded position within the device and the securing system is released from the exposure device only by means of a deliberate operation;
 3. The outlet fittings, lock box, and drive cable fittings on each radiographic exposure device are equipped with safety plugs or covers installed for storage and transportation to protect the source assembly from water, mud, sand, or other foreign matter;
 4. Each sealed source or source assembly has attached to it or is engraved with a durable, legible, and visible label with the words: "DANGER--RADIOACTIVE." The licensee shall ensure that the label does not interfere with safe operation of the equipment;
 5. The guide tube is able to withstand a crushing test that closely approximates the crushing forces that are likely to be encountered during use, and a kinking resistance test that closely approximates the kinking forces that are likely to be encountered during use;
 6. A guide tube is used if a person moves the source out of the device;
 7. An exposure head or similar device, designed to prevent the source assembly from passing out of the end of the guide tube, is attached to the outermost end of the guide tube during industrial radiography operations;

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8. The guide tube exposure head connection is able to withstand the tensile test for control units specified in ANSI N432-1980, incorporated by reference in subsection (A); and
 9. Source changers provide a system for ensuring that the source is not accidentally withdrawn from the changer when a person is connecting or disconnecting the drive cable to or from the source assembly.
- D.** A licensee shall ensure that radiographic exposure devices and associated equipment in use after January 10, 1996 comply with the requirements of this Section.
- E.** Notwithstanding subsection (A), a licensee with equipment used in industrial radiographic operations need not comply with Sec. 8.92(C) of the Endurance Test in American National Standards Institute N432-1980 if the prototype equipment has been tested using a torque value representative of the torque that an individual using the radiography equipment can realistically exert on the lever or crankshaft of the drive mechanism.

Historical Note

Former Rule Section E.3; Former Section R12-1-503 repealed, new Section R12-1-503 adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Former Section R12-1-503 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-504. Radiation Survey Instruments

- A.** A licensee shall maintain at least two calibrated and operable radiation survey instruments at each location where sources of radiation are present to make radiation surveys required by this Article and Article 4 of this Chapter. Instrumentation required by this Section shall be capable of measuring a range from 0.02 millisieverts (2 millirems) per hour through 0.01 sievert (1 rem) per hour.
- B.** A licensee shall ensure that each radiation survey instrument required under subsection (A) is calibrated:
1. At intervals that do not exceed six months, and after instrument servicing, except for battery changes;
 2. For linear scale instruments, at two points located approximately one-third and two-thirds of full-scale on each scale; for logarithmic scale instruments, at mid-range of each decade, and at two points of at least one decade; and for digital instruments, at 3 points between 0.02 and 10 millisieverts (2 and 1000 millirems) per hour; and
 3. So that an accuracy within plus or minus 20% of the calibration source can be demonstrated at each point checked.
- C.** A licensee shall maintain calibration records for each radiation survey instrument, and maintain each record for three years after it is made.

Historical Note

Former Rule Section E.4; Former Section R12-1-504 repealed, new Section R12-1-504 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-504 repealed, new Section R12-1-504 adopted effective December 20, 1985 (Supp. 85-6). Former Section R12-1-504 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-505. Leak Testing and Replacement of Sealed Sources

- A.** A licensee shall ensure that replacement of any sealed source fastened to or contained in a radiographic exposure device and leak testing of any sealed source is performed by a person authorized to do so by the Agency, NRC, or another Agreement State.
- B.** A licensee shall ensure that opening, repairing, or modifying any sealed source is performed by a person specifically authorized to do so by the Agency, NRC, or another Agreement State.
- C.** A licensee that uses a sealed source shall have the source tested for leakage by a qualified person at intervals that do not exceed six months. The person who performs leak testing of the source shall use a method approved by the Agency, NRC, or by another Agreement State. A wipe sample shall be taken from the nearest accessible point to the sealed source where contamination might accumulate. The wipe sample shall be analyzed for radioactive contamination. The licensee shall ensure that the analysis is capable of detecting the presence of 185 Bq (0.005 microcurie) of radioactive material on the test sample and a person specifically authorized by the Agency, NRC, or another Agreement State performs the analysis. The licensee shall maintain records of the leak tests in accordance with this Section.
- D.** Unless a sealed source is accompanied by a certificate from the transferor that shows that the sealed source has been leak tested within six months before the transfer, a licensee shall not use the sealed source until it is tested for leakage. A licensee is not required to test a sealed source that is in storage, but shall test each sealed source before use or transfer to another person if the interval of storage exceeds six months.
- E.** A licensee shall immediately withdraw equipment containing a leaking source from use and have it decontaminated and repaired or dispose of the source in accordance with this Chapter. The licensee shall file a report with the Director of the Agency within five days of any test with results that exceed the threshold in this subsection, and describe the equipment involved, the test results, and corrective action taken. If a leak test conducted under this Section reveals the presence of 185 Bq (0.005 microcurie) or more of removable radioactive material the Agency classifies the sealed source as leaking.
- F.** A licensee shall test for DU contamination at intervals that do not to exceed 12 months a radiographic exposure device that uses depleted uranium (DU) shielding and an "S" tube configuration. The licensee shall ensure that the analysis is capable of detecting the presence of 185 Bq (0.005 microcuries) of radioactive material on the test sample and a person specifically authorized by the Agency, NRC, or another Agreement State performs the analysis. If the testing reveals the presence of 185 Bq (0.005 microcuries) or more of removable DU contamination, the licensee shall remove the exposure device from use until an evaluation of the wear on the S-tube is completed. If the evaluation reveals that the S-tube is worn through, the licensee shall ensure that the device is not used again. The licensee is not required to test for DU contamination if the radiographic exposure device is in storage. Before using or transferring the radiographic exposure device, the licensee shall test the device for DU contamination if the interval of storage exceeds 12 months. The licensee shall maintain records of the DU leak test in accordance with subsection (G).
- G.** A licensee shall maintain records of leak test results for each sealed source and for each device that contains DU. The licensee shall ensure results are in Becquerels (microcuries), and retain each record for three years after it is made or until the source is removed from storage and tested, whichever is longer.

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Historical Note

Former Rule Section E.5; Former Section R12-1-505 repealed, new Section R12-1-505 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-505 repealed, new Section R12-1-505 adopted effective December 20, 1985 (Supp. 85-6). Amended subsections (A), (F) and (G) effective May 2, 1988 (Supp. 88-2). Former Section R12-1-505 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-506. Quarterly Inventory

- A. A licensee shall conduct a quarterly physical inventory to account for all sealed sources and devices that contain depleted uranium.
- B. A licensee shall maintain a record of the quarterly inventory required under subsection (A) for three years after it is made.
- C. The record required in subsection (B) shall include the date of the inventory, name of the individual who conducted the inventory, radionuclide, number of becquerels (curies) or mass (for DU) in each device, location of sealed source and associated devices, and manufacturer, model, and serial number of each sealed source and device as applicable.

Historical Note

Former Rule Section E.6; Former Section R12-1-506 repealed, new Section R12-1-506 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-506 repealed, new Section R12-1-506 adopted effective December 20, 1985 (Supp. 85-6). Amended subsection (A) effective May 2, 1988 (Supp. 88-2). Former Section R12-1-506 repealed, new Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-507. Utilization Logs

- A. A licensee shall maintain for each sealed source a utilization log that provides all of the following information:
 1. A description, including the make, model, and serial number of each radiographic exposure device, and each sealed source transport and storage container that contains a sealed source;
 2. The identity and signature of the radiographer using the source; and
 3. The plant or site where the source is used and dates of use, including the date each source is removed from and returned to storage.
- B. A licensee shall retain the log required by subsection (A) for three years after the log is made.

Historical Note

Former Section R12-1-507 repealed effective December 20, 1985 (Supp. 85-6). New Section adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-508. Inspection and Maintenance of Radiographic Exposure Devices, Transport and Storage Containers, Source Changers, Survey Instruments, and Associated Equipment

- A. A licensee shall perform visual and operability checks on each survey instrument, radiographic exposure device, transport and storage container, source changer, and associated equip-

ment before use on each day the equipment is to be used to ensure that the equipment is in good working condition, the source is adequately shielded, and required labeling is present. A survey instrument operability check shall be performed using a check source or other authorized means. If an equipment problem is found, the licensee shall remove the equipment from service until it is repaired.

- B. A licensee shall have written inspection and maintenance procedures to ensure that:
 1. Radiographic exposure devices, source changers, transport and storage containers, survey instruments, and associated equipment that require inspection and maintenance at intervals that do not exceed three months or before first use of the equipment are functioning properly and safely. Replacement components shall meet design specifications. If an equipment problem is discovered, the licensee shall remove the equipment from service until it is repaired; and
 2. Type B packages are shipped and maintained in accordance with the certificate of compliance or other approval.
- C. A licensee shall maintain records of daily checks and quarterly inspections of radiographic exposure devices, transport and storage containers, source changers, survey instruments, and associated equipment, and retain each record for three years after it is made. The record shall include the date of the check or inspection, name of the inspector, equipment involved, any problems found, and any repair or needed maintenance performed.

Historical Note

Former Section R12-1-508 repealed effective December 20, 1985 (Supp. 85-6). New Section adopted effective April 2, 1990 (Supp. 90-2). Heading amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-509. Surveillance

During each radiographic operation, a radiographer or the radiographer's assistant, as permitted by R12-1-510, shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, except at permanent radiographic installations where all entrances are locked and the licensee is in compliance with R12-1-539.

Historical Note

Former Section R12-1-509 repealed effective December 20, 1985 (Supp. 85-6). New Section adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-510. Radiographic Operations

- A. If industrial radiography is performed at a location other than a permanent radiographic installation, a licensee shall ensure that the radiographer is accompanied by at least one other radiographer or radiographer's assistant, qualified under R12-1-543. The additional radiographer or radiographer's assistant shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. Industrial radiography is prohibited if only one qualified individual is present.
- B. A licensee shall ensure that each industrial radiographic operation is conducted at a location of use authorized on the license

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in a permanent radiographic installation, unless another permanent location is specifically authorized by the Agency.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section adopted effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed;
new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-511. Repealed**Historical Note**

Repealed effective December 20, 1985 (Supp. 85-6).
New Section adopted effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-512. Radiation Safety Officer (RSO)

- A.** A licensee shall have a radiation safety officer (RSO) who is responsible for implementing procedures and regulatory requirements in the daily operation of the radiation safety program.
- B.** Except as provided in subsection (C), the licensee shall ensure that the RSO satisfies the following minimum requirements:
1. The training and testing requirements in R12-1-543,
 2. Two thousand hours of hands-on experience as a qualified radiographer for an industrial radiographic operation, and
 3. Formal training in the establishment and maintenance of a radiation safety program.
- C.** If the licensee uses an individual in the position of RSO who does not have the training and experience required in subsection (B), the licensee shall provide the Agency with a description of the individual's training and experience in the field of ionizing radiation and training with respect to the establishment and maintenance of a radiation safety protection program so the Agency can determine whether the individual is qualified to perform under subsection (D).
- D.** The specific duties and authorities of the RSO include, but are not limited to:
1. Establishing and overseeing operating, emergency, and ALARA procedures as required in Article 4 of this Chapter and reviewing them every year to ensure that the procedures in use conform to current Agency rules and license conditions;
 2. Overseeing and approving all phases of the training program for radiographic personnel, ensuring that appropriate and effective radiation protection practices are taught;
 3. Overseeing radiation surveys, leak tests, and associated documentation to ensure that the surveys and tests are performed in accordance with the rules and taking corrective measures if levels of radiation exceed established action limits;
 4. Overseeing the personnel monitoring program to ensure that devices are calibrated and used properly by occupationally exposed personnel and ensuring that records are kept of the monitoring results and timely notifications are made as required in R12-1-444; and
 5. Overseeing operations to ensure that they are conducted safely and instituting corrective actions, which may include ceasing operations if necessary.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed;
new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-513. Form of Records

A licensee shall maintain records in accordance with R12-1-405.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-514. Limits on External Radiation Levels from Storage Containers and Source Changers

The maximum rate limits for storage containers and source changers are 2 millisieverts (200 mRem/hr) at any exterior surface and 0.1 millisieverts (10 mRem/hr) at 1 meter from any exterior surface with the sealed source in the shielded position.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-515. Locking Radiographic Exposure Devices, Storage Containers, and Source Changers

- A.** Except at permanent radiographic installations governed by R12-1-539, a licensee shall ensure that each radiographic exposure device has a lock or an outer container with a lock designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The licensee shall ensure that the exposure device or its container, if applicable, is locked (and if a keyed lock, with the key removed) if the device or container is not under the direct surveillance of a radiographer or a radiographer's assistant. During radiographic operations, the radiographer or radiographer's assistant shall secure the sealed source assembly in the shielded position each time the source is returned to the shielded position.
- B.** A licensee shall ensure that each sealed source storage container and source changer has a lock or an outer container with a lock designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The licensee shall ensure that each storage container and source changer is locked (and if a keyed lock, with the key removed) if the storage container or source changer contains a sealed source and is not under the direct surveillance of a radiographer or a radiographer's assistant.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-516. Records of Receipt and Transfer of Sealed Sources

- A.** A licensee shall maintain records that show each receipt and transfer of a sealed source or device that uses DU for shielding and retain each record for three years after it is made.
- B.** The records shall contain separate entries for each transaction, including the date, name of the individual making the record, radionuclide, number of Becquerels (curies) or mass (for DU), and manufacturer, model, and serial number of each sealed source or device, as applicable.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

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R12-1-517. Posting

A licensee shall post any area in which industrial radiography is performed as required by R12-1-429. Exceptions listed in R12-1-430 do not apply to industrial radiographic operations.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-518. Labeling, Storage, and Transportation

- A.** A licensee shall not use a source changer or a storage container to store licensed material unless the source changer or the storage container has securely attached to it a durable, legible, and clearly visible label that bears the standard trefoil radiation caution symbol and the standard colors for the symbol specifically: magenta, purple, or black on a yellow background, and the label has a minimum diameter of 25 mm and the wording "CAUTION (or DANGER), RADIOACTIVE MATERIAL NOTIFY CIVIL AUTHORITIES (or "NAME OF COMPANY")"
- B.** A licensee shall not transport licensed material unless the material is packaged and the package is labeled, marked, and accompanied with appropriate shipping papers in accordance with 10 CFR 71, January 1, 2004, published by the Office of the Federal Register, National Archives and Records Administration, incorporated by reference, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- C.** A licensee shall physically secure locked radiographic exposure devices and storage containers behind a locked door to prevent tampering or removal by unauthorized personnel. The licensee shall store licensed material in a manner that will minimize danger from explosion or fire.
- D.** A licensee shall lock each transport package that contains licensed material and physically secure the package behind the locked doors of the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal of the licensed material from the vehicle.

Historical Note

Repealed effective December 20, 1985 (Supp. 85-6).
New Section made by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-519. Repealed**Historical Note**

Repealed effective December 20, 1985 (Supp. 85-6).

R12-1-520. Repealed**Historical Note**

Repealed effective December 20, 1985 (Supp. 85-6).

R12-1-521. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-522. Operating and Emergency Procedures

- A.** A licensee shall ensure that the operating and emergency procedures include, at a minimum, instructions in the following, as applicable:

1. Handling and use of sealed sources or radiographic exposure devices, so that persons are not exposed to radiation that exceeds the limits in Article 4 of this Chapter;
 2. Methods and occasions for conducting radiation surveys;
 3. Methods for controlling access to radiographic areas;
 4. Methods and occasions for locking and securing radiographic exposure devices, transport and storage containers, and sealed sources;
 5. Personnel monitoring and associated equipment;
 6. Transportation of sealed sources to field locations, including packing radiographic exposure devices and storage containers in vehicles, placarding vehicles, and maintaining control of the sealed sources during transportation, as required in 49 CFR 171-173, 2002 edition, published October 1, 2002, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference and on file with the Agency. This incorporation contains no future editions or amendments;
 7. Inspection, maintenance, and operability checks of radiographic exposure devices, survey instruments, transport containers, and storage containers;
 8. Actions to be taken immediately by radiography personnel if a pocket dosimeter is found to be off-scale or an alarm rate meter sounds an alarm;
 9. Procedures for identifying and reporting defects and non-compliance, as required by R12-1-448 and R12-1-535;
 10. Procedures for notifying the RSO and the Agency in the event of an accident;
 11. Methods for minimizing exposure of persons in the event of an accident;
 12. Procedures for recovering a source if the licensee is responsible for source recovery; and
 13. Maintenance of records.
- B.** The licensee shall maintain copies of current operating and emergency procedures until the Agency terminates the license. Superseded procedures shall be maintained for three years after being superceded. Additionally, a copy of the procedures shall be maintained at field stations in accordance with R12-1-540.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-523. Personnel Monitoring

- A.** A licensee shall not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm rate meter, and a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. At permanent radiography installations where other appropriate alarming or warning devices are in routine use, the wearing of an alarm rate meter is not required. A licensee shall:
1. Use a pocket dosimeter with a range from zero to 2 millicisieverts (200 millirem). The licensee shall ensure that each dosimeter is recharged at the start of each shift. Electronic personal dosimeters are permitted in place of ion-chamber pocket dosimeters.
 2. Assign a personnel dosimeter to each individual, who shall wear the assigned equipment.
 3. Replace film badges at least monthly and ensure that other personnel dosimeters are processed and evaluated

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by an accredited NVLAP processor and replaced at periods that do not exceed three months.

4. After replacement, ensure that each personnel dosimeter is processed as soon as possible.
- B.** A licensee shall record exposures noted from direct reading dosimeters, such as pocket dosimeters or electronic personal dosimeters, at the beginning and end of each shift. The licensee shall maintain the records for three years after the Agency terminates the license.
- C.** A licensee shall check pocket dosimeters and electronic personal dosimeters for correct response to radiation at periods that do not exceed 12 months. The licensee shall record the results of each check and maintain the records for three years after the dosimeter check is performed. The licensee shall discontinue use of a dosimeter if it is not accurate within plus or minus 20 percent of the true radiation exposure.
- D.** If an individual's pocket dosimeter has an off-scale reading, or the individual's electronic personal dosimeter reads greater than 2 millisieverts (200 millirems), and radiation exposure cannot be ruled out as the cause, a licensee shall process the individual's dosimeter within 24 hours of the suspect exposure. The licensee shall not allow the individual to resume work associated with sources of radiation until the individual's radiation exposure has been determined. Using information from the dosimeter, the licensee's RSO or the RSO's designee shall calculate the affected individual's cumulative radiation exposure as prescribed in Article 4 of this Chapter and include the results of this determination in the personnel monitoring records maintained in accordance with subsection (B).
- E.** If the personnel dosimeter that is required by subsection (A) is lost or damaged, the licensee shall ensure that the worker ceases work immediately until the licensee provides a replacement personnel dosimeter that meets the requirements in subsection (A) and the RSO or the RSO's designee calculates the exposure for the time period from issuance to discovery of the lost or damaged personnel dosimeter. The licensee shall maintain a record of the calculated exposure and the time period for which the personnel dosimeter was lost or damaged in accordance with subsection (B).
- F.** The licensee shall maintain dosimetry reports received from the accredited NVLAP personnel dosimeter processor in accordance with subsection (B).
- G.** For each alarm rate meter a licensee shall ensure that:
 1. At the start of each shift, the alarm functions (sounds) properly before an individual uses the device;
 2. Each device is set to give an alarm signal at a preset dose rate of 5 mSv/hr (500 mrem/hr); with an accuracy of plus or minus 20 percent of the true radiation dose rate;
 3. A special means is necessary to change the preset alarm function on the device; and
 4. Each device is calibrated at periods that do not exceed 12 months for correct response to radiation. The licensee shall maintain records of alarm rate meter calibrations in accordance with subsection (B).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-524. Supervision of a Radiographer's Assistant

If a radiographer's assistant uses a radiographic exposure device, associated equipment, or a sealed source or conducts a radiation

survey required by R12-1-533(B) to determine that the sealed source has returned to the shielded position after an exposure, the licensee shall ensure that the assistant is under the personal supervision of a radiographer. For purposes of this Section "personal supervision" means:

1. The radiographer is physically present at the site where the sealed source is being used,
2. The radiographer is available to give immediate assistance if required, and
3. The radiographer is able to observe the assistant's performance directly.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-525. Notification of Field Work

Each day radioactive material is used for industrial radiography, a licensee shall notify the Agency of any planned field radiography. The notice shall be in writing and specify the location of the field work, the name of the supervising individual at the job site, and the expected duration of the work at the job site listed in the notice. A facsimile that provides the required information is sufficient notice.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-526. Reserved**R12-1-527. Reserved****R12-1-528. Reserved****R12-1-529. Reserved****R12-1-530. Reserved****R12-1-531. Security**

During each radiographic operation, the radiographer or radiographer's assistant shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in Article 1, unless:

1. The high radiation area is equipped with a control device or an alarm system as prescribed in R12-1-420(A), or
2. The high radiation area is locked to protect against unauthorized or accidental entry.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-532. Posting

Notwithstanding any provisions in R12-1-430, areas in which radiography is being performed shall be conspicuously posted as required by R12-1-429(A) and (B).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3).

R12-1-533. Radiation Surveys

- A.** A licensee shall conduct surveys with a calibrated and operable radiation survey instrument that meets the requirements of R12-1-504.
- B.** Using a survey instrument that complies with subsection (A), the licensee shall conduct a survey of the radiographic exposure device and the guide tube after each exposure before approaching the device or the guide tube. The survey shall be performed to determine that the sealed source is in the shielded

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position before the radiographer or radiographer's assistant exchanges films, repositions the exposure head, or dismantles the equipment.

- C. The licensee shall conduct a survey of the radiographic exposure device with a calibrated radiation survey instrument any time the source is exchanged or the device is placed in a storage area, as defined in R12-1-102, to ensure that the sealed source is in the shielded position.
- D. The licensee shall maintain a record of each exposure device survey conducted before the device is placed in storage under subsection (C), if that survey is the last one performed during the workday. Each record shall be maintained for three years after the record is made.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-534. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-535. Notifications

- A. In addition to the reporting requirements specified in Article 4, each licensee shall provide a written report to the Agency if any of the following incidents involving radiography equipment occur:
 1. Unintentional disconnection of the source assembly from the control cable;
 2. Inability to retract the source assembly to the fully shielded position or secure it in this position; or
 3. Failure of any component (critical to safe operation of the device) to properly perform its intended function;
- B. A licensee shall include the following information in any report submitted under this Section, regarding radiography equipment, or Article 4, regarding an overexposure, if the report concerns the failure of safety components of radiography equipment:
 1. A description of the equipment problem;
 2. Cause of the incident, if known;
 3. Name of manufacturer and model number of the equipment involved in the incident;
 4. Place, date, and time of the incident;
 5. Actions taken to establish normal operations;
 6. Corrective actions taken or planned to prevent recurrence; and
 7. Qualifications of personnel involved in the incident.
- C. Any licensee that conducts radiographic operations, or stores radioactive material at a location not listed on the license or for a period longer than 180 days during a calendar year, shall notify the Agency of these activities before the 180 days has elapsed.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1).

R12-1-536. Reserved

R12-1-537. Reserved

R12-1-538. Reserved

R12-1-539. Permanent Radiographic Installations

- A. If a licensee maintains a permanent radiographic installation that does not fall within the definition of "enclosed radiography" in R12-1-102, the licensee shall ensure that each entrance, used for personnel access to the high radiation area, has either:
 1. An entrance control device of the type described in R12-1-420(A)(1) that reduces the radiation level upon entry into the area, or
 2. Both conspicuous visible and audible alarm signals to warn of the presence of radiation. The licensee shall ensure that the visible signal is actuated by radiation if a source is exposed and the audible signal is actuated if someone attempts to enter the installation while a source is exposed.
- B. A licensee with an alarm signal shall test the alarm signal for proper operation with a radiation source each day before the installation is used for radiographic operations. The test shall include a check of both the visible and audible signals. A licensee with an entrance control device shall test the device monthly. If an entrance control device or alarm signal is operating improperly, the licensee shall immediately label the device or signal as "defective" and repair the device or signal within seven calendar days. The licensee may continue to use the facility during this seven-day period, if the licensee implements continuous surveillance requirements of R12-1-509 and uses an alarming rate meter.
- C. A licensee shall maintain each record an alarm system or entrance control device test for three years after the record is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-540. Location of Documents and Records

- A. A licensee shall maintain a copy of each record required by this Article and other applicable Articles of this Chapter at a location specified under R12-1-502(I).
- B. A licensee shall maintain a copy of each record listed below at each field station and temporary job site:
 1. The license that authorizes use of radioactive material;
 2. A copy of Articles 4, 5, and 10 of this Chapter;
 3. Utilization logs for each radiographic exposure device dispatched from that location, as required by R12-1-507;
 4. Records of equipment problems identified in daily checks of equipment, as required by R12-1-508(A);
 5. Records of alarm system and entrance control checks as required by R12-1-539;
 6. Records of direct-reading dosimeters, such as pocket dosimeters and electronic personnel dosimeters as required by R12-1-523;
 7. Operating and emergency procedures as required by R12-1-522;
 8. A report on the most recent calibration of the radiation survey instruments in use at the site as required by R12-1-504;
 9. A report on the most recent calibration of each alarm rate meter, and operability check of each pocket dosimeter and electronic personnel dosimeter as required in R12-1-523;
 10. Most recent survey record as required by R12-1-533;

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11. The shipping papers for the transportation of radioactive material required by 10 CFR 71.5, 2003 edition, published January 1, 2003, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference and on file with the Agency (this incorporation contains no future editions or amendments); and
12. If operating under reciprocity in accordance with R12-1-320, a copy of the NRC or Agreement State license authorizing the use of radioactive materials.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-541. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective August 10, 1994 (Supp. 94-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1).

R12-1-542. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective August 10, 1994 (Supp. 94-3). New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1).

Appendix A. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective December 20, 1985 (Supp. 85-6). Repealed effective April 2, 1990 (Supp. 90-2).

R12-1-543. Training

- A. A licensee shall not allow an individual to act as a radiographer until the individual has received training in the subjects in subsection (G), has participated in a minimum of two months of on-the-job training, and is certified through a radiographer certification program by a independent certifying organization in accordance with the criteria specified in Appendix A.
 1. A licensee shall provide the Agency with proof of an individual's certification and a written request that the individual be added to a license as a certified radiographer.
 2. A licensee shall maintain proof of certification at the job site where a radiographer is performing field radiography.
 3. A licensee that employs certified radiographers in Arizona shall ensure that:
 - a. Each radiographer has obtained initial certification within the last five years, and
 - b. An uncertified radiographer works only as a radiographer's assistant until certified.
 4. A radiographer shall recertify every five years by:
 - a. Taking an approved radiography certification examination in accordance with this subsection; or
 - b. Providing written evidence that the radiographer is active in the practice of industrial radiography and has participated in continuing education during the previous five-year period.
5. If an individual cannot provide the written evidence required in subsection (4)(b), the individual shall retake the certification examination.
6. A radiographer shall provide the licensee with proof of certification in the form of a card issued by the certifying organization that contains:
 - a. A picture of the certified radiographer,
 - b. The radiographer's certification number,
 - c. The date the certification expires, and
 - d. The radiographer's signature.
- B. A licensee shall not allow an individual to act as a radiographer until the individual:
 1. Has received copies of and instruction in the requirements of this Article; applicable Sections of Articles 4 and 10 and R12-1-107; applicable DOT regulations in 10 CFR 71, January 1, 2003 edition, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference, contains no future editions or amendments, and is on file with Agency; the Agency license or licenses under which the radiographer will perform industrial radiography; and the licensee's operating and emergency procedures;
 2. Has demonstrated an understanding of the licensee's license and operating and emergency procedures by successfully completing a written or oral examination that covers the relevant material;
 3. Has received training in:
 - a. Use of the licensee's radiographic exposure devices and sealed sources,
 - b. Daily inspection of devices and associated equipment, and
 - c. Use of radiation survey instruments; and
 4. Has demonstrated an understanding of the use of radiographic exposure devices, sources, survey instruments, and associated equipment described in subsection (B)(3) by successfully completing a practical examination covering this material.
- C. A licensee shall not allow an individual to act as a radiographer's assistant until the individual:
 1. Has received copies of and instruction in the requirements of this Article; applicable Sections of Articles 4 and 10 and R12-1-107; applicable DOT regulations in 10 CFR 71, January 1, 2003 edition, by the Office of the Federal Register, National Archives and Records Administration, Washington, D.C. 20408, which is incorporated by reference, contains no future editions or amendments, and is on file with Agency; the Agency license or licenses under which the radiographer's assistant will perform industrial radiography; and the licensee's operating and emergency procedures;
 2. Has developed competence to use, under the personal supervision of the radiographer, the licensee's radiographic exposure devices, sealed sources, associated equipment, and radiation survey instruments; and
 3. Has demonstrated understanding of the instructions provided under subsection (C)(1) by successfully completing a written test on the subjects covered and has demonstrated competence using the hardware described in subsection (C)(2) by successfully completing a practical examination.
- D. A licensee shall provide refresher safety training for each radiographer and radiographer's assistant at intervals not to exceed 12 months.

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E. Unless an individual serves as both a radiographer and an RSO, the RSO or the RSO's designee shall design and implement an inspection program to examine the job performance of each radiographer and radiographer's assistant and to ensure that the Agency's rules and license requirements, and the licensee's operating and emergency procedures are followed. The inspection program shall:

1. Include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation, at intervals that do not exceed six months; and
2. If a radiographer or a radiographer's assistant has not participated in an industrial radiographic operation for more than six months, the radiographer shall demonstrate knowledge of the training requirements in subsection (B)(3) and the radiographer's assistant shall demonstrate knowledge of the training requirements of subsection (C)(2) by a practical examination before participating in a radiographic operation.

F. A licensee shall maintain records of the training required in this Section including certification documents, written and practical examinations, refresher safety training documents, and inspection documents, in accordance with subsection (I).

G. A licensee shall include the following subjects in the training required under subsection (A):

1. Fundamentals of radiation safety, including:
 - a. Characteristics of gamma radiation,
 - b. Units of radiation dose and quantity of radioactivity,
 - c. Hazards of exposure to radiation,
 - d. Levels of radiation from licensed material, and
 - e. Methods of controlling radiation dose (time, distance, and shielding);
2. Radiation detection instruments, including:
 - a. Use, operation, calibration, and limitations of radiation survey instruments;
 - b. Survey techniques; and
 - c. Use of personnel monitoring equipment;
3. Equipment topics, including:
 - a. Operation and control of radiographic exposure equipment, use of remote handling equipment, and use of storage containers, using pictures or models of source assemblies (pigtailed);
 - b. Storage, control, and disposal of licensed material; and
 - c. Inspection and maintenance of equipment;
4. The requirements of pertinent Agency rules; and
5. Case histories of accidents in radiography.

H. A licensee shall maintain records of radiographer certification in accordance with subsection (I)(1) and provide proof of certification as required in subsection (A)(1).

I. A licensee shall maintain the following records for three years after each record is made:

1. Records of training for each radiographer and each radiographer's assistant. For radiographers, the records shall include radiographer certification documents and verification of certification status. All records shall include copies of written tests, dates of oral and practical examinations, and names of individuals who conducted and took the oral and practical examinations; and
2. Records of annual refresher safety training and semi-annual inspections of job performance for each radiographer and each radiographer's assistant. The records for the annual refresher safety training shall list topics discussed during training, the date of training, and names of each instructor and attendee. For inspections of job performance, the records shall include a list of the items

checked during the inspection and any non-compliance observed by the RSO.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

Appendix A. Standards for Organizations that Provide Radiography Certification

Note: For purposes of this Article an "independent certifying organization" means an organization that meets all of the criteria in this Appendix.

I. Requirements for an Organization that Provides Radiographer Certification

To qualify to provide radiographer certification an organization shall:

- A.** Be a society or association, with members who participate in, or have an interest in, the field of industrial radiography;
- B.** Not restrict membership because of race, color, religion, sex, age, national origin, or disability;
- C.** Have a certification program that is open to nonmembers, as well as members;
- D.** Be an incorporated, nationally recognized organization that is involved in setting national standards of practice within its fields of expertise;
- E.** Have a staff comparable to other nationally recognized organizations, a viable system for financing its operations, and a policy-and decision-making review board;
- F.** Have a set of written, organizational by-laws and policies that address conflicts of interest and provide a system for monitoring and enforcing the by-laws and policies;
- G.** Have a committee, with members who can carry out their responsibilities impartially, review and approve the certification guidelines and procedures, and advise the organization's staff in implementing the certification program;
- H.** Have a committee, with members who can carry out their responsibilities impartially, review complaints against certified individuals and determine sanctions;
- I.** Have written procedures describing all aspects of the organization's certification program;
- J.** Maintain records of the current status of each individual's certification and administration of the certification program;
- K.** Have procedures to ensure that certified individuals are provided due process with respect to administration of the certification program, including a process for becoming certified and a process for imposing sanctions against certified individuals;
- L.** Have procedures for proctoring examinations and qualifying proctors. The organization, through these procedures, shall ensure that an individual who proctors an examination is not employed by the same company or corporation (or a wholly-owned subsidiary of the company or corporation) that employs an examinee;
- M.** Exchange information about certified individuals with the Agency, other independent certifying organizations, the NRC, or Agreement States and allow periodic review of its certification program and related records; and
- N.** Provide a description to the Agency of its procedures for choosing examination sites and providing a favorable examination environment.

II. Requirements for a Certification Program

An independent certifying organization shall ensure that its certification program:

- A.** Requires an applicant for certification to:
 1. Obtain training in the subjects listed in R12-1-543(G) or equivalent NRC or Agreement State regulations, and

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2. Satisfactorily complete a written examination that covers these subjects;
- B.** Requires an applicant for certification to provide documentation demonstrating that the applicant has:
 1. Received training in the subjects listed in R12-1-543(G) or equivalent NRC or Agreement State regulations;
 2. Satisfactorily completed the on-the-job training required in R12-1-543(A); and
 3. Received verification by an Agreement State or a NRC licensee that the applicant has demonstrated the capability of independently working as a radiographer;
- C.** Provides procedures that protect examination questions from disclosure;
- D.** Provides procedures for denying certification to an applicant and revoking, suspending, and reinstating a certificate;
- E.** Provides a certification period that is not less than three years or more than five years, procedures for renewing certifications and, if the procedures allow renewals without examination, a system for assessing evidence of recent full-time employment and annual refresher training; and
- F.** Provides a timely response to inquiries, by telephone or letter, from members of the public, about an individual's certification status.

III. Requirements for a Written Examination

An independent certifying organization shall ensure that its examination:

- A.** Is designed to test an individual's knowledge and understanding of the subjects listed in R12-1-543(G);
- B.** Is written in a multiple-choice format; and
- C.** Has psychometrically valid questions drawn from a question bank and based on the material in R12-1-543(G).

Historical Note

New Appendix made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 6. USE OF X-RAYS IN THE HEALING ARTS

R12-1-601. Repealed

Historical Note

Former Rule Section F.1; Former Section R12-1-601 repealed, new Section R12-1-601 adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 8, 1986 (Supp. 86-4).

R12-1-602. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

"Accessible surface" means the external surface of the enclosure or housing provided by the manufacturer.

"Added filter" means the filter added to the inherent filtration.

"Aluminum equivalent" means the thickness of aluminum (type 1100 alloy) that affords equivalent attenuation, under specified conditions, as the material in question. (The nominal chemical composition of type 1100 aluminum alloy is 99.00 percent minimum aluminum, 0.12 percent copper).

"Annual" means annually within two months of the anniversary due date as determined by the original installation date, inspection date, survey date, or a reset date created by conducting a full survey before the anniversary date has arrived.

"Assembler" means any person engaged in the business of assembling, replacing, or installing one or more components into an x-ray system or subsystem.

"Attenuation block" means a block or stack, having dimensions 20 cm by 20 cm by 3.8 cm (7.9 inches by 7.9 inches by 1.5 inches) of type 1100 aluminum alloy or other materials that afford equivalent attenuation.

"Automatic exposure control" means a device that automatically controls one or more technique factors in order to obtain, at a preselected location or locations, a required quantity of radiation.

"Barrier" (See "Protective barrier")

"Beam axis" means a line from the source through the center of the x-ray field.

"Beam-limiting device" means a device that provides a means to restrict the dimensions of the x-ray field.

"C-arm x-ray system" means an x-ray system that has the image receptor and x-ray tube housing assembly connected by a common mechanical support system to maintain a desired spatial relationship. This system is designed to allow a change in the projection of the beam through the patient without a change in the position of the patient.

"Changeable filter" means any filter, exclusive of inherent filtration, which can be removed from the useful beam by an electronic, mechanical, or physical process.

"Cinefluorography" means fluorography that uses a movie camera to record fluorograph images on film for later playback.

"Coefficient of variation" means the ratio of the standard deviation to the mean value of a population of observations.

"Collimator" means an adjustable device, generally made of lead, that is fixed to an x-ray tube housing to intercept or collimate the useful beam and, if not made of lead, has a lead equivalency of not less than that of the tube housing assembly.

"Compression device" means a device used to bring object structures closer to the image plane of a radiograph and make a part of the human body a more uniform thickness so the optical density of the radiograph will be more uniform.

"Computed tomography" means the production of a tomogram by the acquisition and computer processing of x-ray transmission data. For purposes of these rules this term has the same meaning as "CT."

"Contact therapy system" means that the x-ray tube port is put in contact with or within 5 centimeters (2 inches) of the surface being treated.

"Control panel" means that part of the x-ray machine where switches, knobs, push-buttons, or other hardware necessary for manually setting the technique factors are located.

"Cooling curve" means the graphical relationship between heat units stored and cooling time.

"CT gantry" means the tube housing assemblies, beam-limiting devices, detectors, and the supporting structure, frame, and cover which hold or enclose these components.

"Dead-man switch" means a switch constructed so that a circuit-closing contact can be maintained only by continuous pressure on the switch by the operator.

"Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.

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“Diagnostic x-ray system” means an x-ray system designed for irradiation of any part of a human or animal body for the purpose of diagnosis or visualization.

“Direct scattered radiation” means scattered radiation that has been deviated in direction only by materials irradiated by the useful beam (see “Scattered radiation”).

“Electronic brachytherapy” means a method of radiation therapy where an electrically generated source of ionizing radiation is placed in or near the tumor or target tissue to deliver therapeutic radiation dosage.

“Entrance exposure rate” means the roentgens per unit time at the point where the center of the useful beam enters the patient.

“Equipment” (See “X-ray equipment”)

“Filter” means material placed in the useful beam to absorb undesirable radiation.

“Fluoroscopic imaging assembly” means a subsystem in which x-ray photons produce a fluoroscopic image. It includes the image receptor or receptors such as the image intensifier and spot-film device, electrical interlocks, if any, and structural material that provides a linkage between the image receptor and diagnostic source assembly.

“Fluoroscopic system” means a radiographic x-ray system used to directly visualize internal structure, the motion of internal structures, and fluids in real time, or near real-time, to aid in the treatment or diagnosis of disease, or the performance of other medical procedures.

“Focal spot” means the region of the anode target in an x-ray tube where electrons from the cathode interact to produce x-rays.

“General purpose radiographic x-ray system” means any radiographic x-ray system that, by design, is not limited to radiographic examination of a specific anatomical region.

“Gonadal shield” means a protective barrier for the testes or ovaries.

“Grid” means a device used to improve the image detail in a radiograph by reducing the intensity of x-ray scatter radiation exiting the film side of the patient.

“Half-value layer” or “HVL” means the thickness of a specified material that attenuates the beam of radiation to an exposure rate that is one-half of its original value. In this definition, the contribution of any scattered radiation, other than that which is present initially in the beam, is excluded.

“Healing arts radiography” means the application of x-radiation to human patients for diagnostic or therapeutic purposes by a licensed practitioner or a person certified in accordance with R12-1-603(B)(1), at the direction of a licensed practitioner. Healing arts radiography includes:

- Positioning the x-ray beam with respect to the patient,
- Anatomical positioning of the patient,
- Selecting exposure factors, or
- Initiating the exposure.

“Healing arts screening” means the application of radiation from an x-ray machine to a human for the detection or evalua-

tion of health indications when the tests are not specifically and individually ordered by a licensed practitioner.

“Image intensifier” means an electronic device, installed in an x-ray system housing, which instantaneously converts an x-ray pattern into a corresponding light image of higher intensity.

“Image receptor” means any device, such as a fluorescent screen or radiographic film, which transforms incident x-ray photons either into a visible image or into another form which can be made into a visible image by further transformation.

“Inherent filtration” means the filtration of the useful beam by permanently installed components of the tube housing assembly.

“Kilovolts peak” or “kVp” (See “Peak tube potential”)

“Lateral fluoroscope” means the x-ray tube and image receptor combination in a biplane system dedicated to the lateral projection. It consists of the lateral x-ray tube housing assembly and the lateral image receptor that are fixed in position relative to the table with the x-ray beam axis parallel to the plane of the table.

“Lead equivalent” means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.

“Leakage radiation” means all radiation emanating from the tube housing except the useful beam and radiation produced when the exposure switch or timer is not activated.

“Leakage technique factors” means the technique factors associated with the diagnostic source assembly that are used in measuring leakage radiation. Included are:

For capacitor energy storage equipment, the maximum-rated peak tube potential and the maximum-rated number of exposures in an hour for operation at the maximum-rated peak tube potential with the quantity of charge per exposure being 10 millicoulombs (mAs) or the minimum obtainable from the unit, whichever is larger;

For field emission equipment rated for pulsed operation, the maximum-rated peak tube potential and maximum-rated number of x-ray pulses in an hour for operation at the maximum-rated peak tube potential; and

For all other source assemblies, the maximum-rated peak tube potential and maximum-rated continuous tube current for the maximum-rated peak tube potential.

“mA” means milliampere.

“Mammographic x-ray system” means an x-ray system that is specifically engineered to image human breasts.

“mAs” means milliampere second.

“Mobile equipment” (See “X-ray equipment”)

“Peak tube potential” means the maximum value of the potential difference across the x-ray tube during an exposure.

“Phantom” means a volume of material that behaves in a manner similar to tissue with respect to the attenuation and scattering of radiation. (i.e. “Breast phantom” means an artificial test object that simulates the average composition of, and various structures in the breast.)

“Phototimer” (See “Automatic exposure control”)

“Portable equipment” (See “X-ray equipment”)

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“Primary protective barrier” (See “Protective barrier”)

“Protective apron” means an apron made of radiation, absorbing material used to reduce radiation exposure.

“Protective barrier” means a barrier of radiation-absorbing material used to reduce radiation exposure.

“Primary protective barrier” means the material, excluding filters, placed in the useful beam.

“Secondary protective barrier” means the material which attenuates stray radiation.

“Protective glove” means a glove made of radiation- absorbing material used to reduce radiation exposure.

“Radiologic physicist” means an individual who:

Is certified by the American Board of Radiology, American Board of Medical Physics, or the American Board of Health Physics;

Possesses documentation of state approval;

Holds a master's degree or higher in a physical science; and

Meets the training and certification requirements in R12-1-615(A)(1)(c).

“Scattered radiation” means radiation that, during passage through matter, has been deviated in direction. (See “Direct scattered radiation”)

“Screen” or “intensifying screen” means a device that converts the energy of the x-ray beam into visible light that interacts with the radiographic film, forming a latent image, or contains photostimulable phosphor plates that upon exposure, emit visible or nonvisible light to create an image.

“Secondary protective barrier” (See “Protective barrier”)

“Shutter” (See “Collimator”)

“Source” means the focal spot of the x-ray tube.

“Source-to-image receptor distance” or “SID” means the distance from the source to the center of the input surface of the image receptor.

“Spot check” means an abbreviated calibration procedure which is performed to assure that a previous calibration continues to be valid. Also, a spot film may be taken to improve visualization by arresting motion and to document medical observations. Note that in some cases, a film may not be created.

“Stationary equipment” (See “X-ray equipment”)

“Stray radiation” means the sum of leakage and scattered radiation.

“System” (See “X-ray system”)

“Technique chart” means a tabulation of technique factors.

“Technique factors” means the following conditions of operation:

For capacitor energy storage equipment, peak tube potential in kV and quantity of charge in mAs;

For field emission equipment rated for pulsed operation, peak tube potential in kV, and number of x-ray pulses;

For CT x-ray systems designed for pulsed operation, peak tube potential in kV, scan time in seconds, and either tube current in mA, x-ray pulse width in seconds, and number of x-ray pulses per scan, or the product of tube current, x-ray pulse width, and number of x-ray pulses in mAs;

For CT x-ray systems not designed for pulsed operation, peak tube potential in kV, and either tube current in mA and scan time in seconds, or the product of tube current, exposure time in mAs, when the scan time and exposure time are equivalent; and

For all other equipment, peak tube potential in kV, and either tube current in mA and exposure time in seconds, or the product of tube current and exposure time in mAs.

“Treatment simulator” means a diagnostic x-ray system that duplicates a medical particle accelerator or other teletherapy in terms of its geometrical, mechanical, and optical qualities; the main function of which, is to display radiation treatment fields so that the target volume may be accurately included in the area of irradiation without delivering excess radiation to surrounding normal tissue.

“Tube” means x-ray tube unless otherwise specified.

“Tube housing assembly” means the tube housing with the tube installed. It includes high-voltage or filament transformers and other elements contained within the tube housing.

“Tube rating chart” means the set of curves that specify the rated limits of operation of the tube in terms of the technique factors.

“Useful beam” means the radiation emanating from the tube housing port or the radiation head and passing through the aperture of the beam-limiting device when the exposure controls are in a mode that causes the system to produce radiation.

“Visible area” means that portion of the input surface on the image receptor over which incident x-ray photons are producing a visible image.

“X-ray equipment” means an x-ray system, subsystem, or component described further by the following terms:

“Hand-held” means x-ray equipment designed to be held by an operator while being used.

“Mobile” means x-ray equipment mounted on a permanent base with wheels or casters for moving while completely assembled.

“Portable” means x-ray equipment designed to be hand-carried, but used with a cord or delayed timer system that allows the operator to be six feet or more away from the useful beam.

“Stationary” means x-ray equipment installed in a fixed location.

“Transportable mobile” means x-ray equipment installed in a vehicle or trailer.

“X-ray system” means an assemblage of components for the controlled production of x-rays. It includes, at minimum, an x-ray high-voltage generator, an x-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components that function with the system are considered integral parts of the system.

“X-ray tube” means any electron tube that is designed for the conversion of electrical energy into x-ray energy. For purposes

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of the rules contained in 12 A.A.C. 1, this term is synonymous with "tube."

Historical Note

Former Rule Section F.2; Former Section R12-1-602 repealed, new Section R12-1-602 adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-603. Operational Standards, Shielding, and Darkroom Requirements

- A.** A person shall not make, sell, lease, transfer, lend, or install x-ray equipment or the supplies used in connection with the equipment unless the supplies and equipment, when properly placed in operation and properly used, meets the requirements of 12 A.A.C. 1.
- B.** A registrant shall direct the operation of x-ray machines under the registrant's control and assure that all of the following provisions are met in the operation of x-ray machines:
1. The registrant shall not permit any individual to engage in the practice of "Healing Arts Radiography" using equipment under the registrant's control, unless the individual possesses, and displays in the primary employer's facility, an official certificate issued by, or is exempt from, the Medical Radiologic Technology Board of Examiners that contains an original signature of its Director or designee. A copy of the certificate shall be posted at any secondary employment location with documentation that verifies that the employer has physically seen the official certificate and has annotated on the copy the location where the official certificate may be viewed by Agency staff.
 2. The registrant shall maintain records documenting compliance with subsection (B)(1) for each individual practicing "Healing Arts Radiography" using equipment under the registrant's control,
 3. The registrant shall provide safety rules to each individual operating x-ray equipment under the registrant's control, including any restrictions in operating procedures necessary for the safe use of the equipment and require that the operator demonstrate familiarity with 12 A.A.C. 1.
- C. Shielding**
1. Each registrant shall provide each installation with primary and secondary protective barriers that are necessary to assure compliance with 12 A.A.C. 1, Article 4.
 2. A registrant shall ensure that attenuation provided by a protective barrier meets or exceeds the level of protection established in Report No. 147 Structural Shielding Design for Medical X-ray Imaging Facilities, November 19, 2004, by the National Council on Radiation Protection and Measurements, (NCRP), NCRP Publications, 7910 Woodmount Ave., Suite 400, Bethesda, MD 20814-3095. This report is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. Copies of the report are available from NCRP Publications: online at <http://www.ncrppublications.org>; toll free at (800) 229-2652 (Ext. 25); or e-mail at NCRPpubs@NCRPonline.org. Each registrant shall use this incorporated material to provide sufficient shielding to prevent a public exposure that exceeds the limits in R12-1-416.

3. A registrant shall:
 - a. Mount each lead barrier so that the barrier will not sag or cold flow because of its own weight and protect the barrier from damage;
 - b. Use barriers designed so that joints between different ends of protective material do not impair the overall protection of the barriers;
 - c. Use barriers designed so that joints at the floor and ceiling do not impair the overall protection of the barriers;
 - d. Use windows, window frames, doors, and door frames that have the same lead equivalence required in the adjacent walls; and
 - e. Cover holes in protective barriers so that overall attenuation is not impaired.
 4. A registrant shall also meet the structural shielding requirements in R12-1-607(C), if the x-ray system in question is not a mobile fluoroscopic unit, dental panoramic, cephalometric, dental CT, or intraoral radiographic system.
- D. Film Processing and Darkroom Requirements.** A registrant shall:
1. Ensure that the darkroom is light-tight and use proper safe-lighting such that any film type in use exposed in a cassette to x-ray radiation sufficient to produce an optical density from 1 to 2 when processed shall not suffer an increase in density greater than 0.1 (0.05 for mammography) when exposed in the darkroom for two minutes with all safe-lights illuminated. (A processor with a daylight loader satisfies this requirement.);
 2. Ensure that film is stored in a cool, dry place and is protected from radiation exposure; and that film located in open packages is stored in a light-tight container;
 3. Ensure that film cassettes and intensifying screens are inspected annually, cleaned, and replaced as necessary;
 4. Ensure that film cassettes contain film and intensifying screens that have the same sensitivity;
 5. Ensure that automatic film processors develop film in accordance with time-temperature relationships recommended by the film manufacturer;
 6. Ensure that manually developed film is developed in accordance with the time-temperature relationships recommended by the manufacturer, and that a timer, thermometer, and a time-temperature chart are available and used in the darkroom;
 7. Ensure that film processing solutions are prepared and maintained in accordance with the directions of the manufacturer;
 8. Ensure that outdated film is not used for diagnostic radiographs.
 9. Follow manufacturer's recommendations for cleaning or inspection of computed radiography (CR) cassettes, but not less than annually;
 10. Follow manufacturer's recommendations for preventive maintenance on digital radiography panels or cassettes, but not less than annually; and
 11. Maintain documentation that demonstrates that requirements of this subsection are being met for three years for agency review from the date of inspection.

Historical Note

Former Rule Section F.3; Former Section R12-1-603 repealed, new Section R12-1-603 adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

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Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-604. General Procedures

A. Each registrant shall ensure the following procedural requirements are met in the operation of x-ray equipment:

1. An x-ray machine which does not meet the provisions of this Chapter shall not be operated for diagnostic or therapeutic purposes, unless specifically exempted by the Agency.
2. Except for patients who cannot be moved out of the room, only the individuals required for the radiological procedure or in training may be present in the room during radiographic exposure, and all the following requirements apply:
 - a. All individuals shall be positioned such that no part of the body, including the extremities not protected by 0.5 mm lead equivalent, will be struck by the useful beam.
 - b. Staff and ancillary personnel shall be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than 0.25 mm lead equivalent.
 - c. Individuals, other than the patient to be examined, who cannot be removed from the room during mobile or portable radiography shall be protected from the direct scatter radiation by whole body protective barriers of 0.25 millimeters lead equivalent or shall be so positioned that the nearest portion of the body is at least 2 meters (6.5 feet) from both the tube head and the nearest edge of the image receptor.
 - d. If a portion of the body of any staff or ancillary personnel is potentially subjected to stray radiation that could result in that individual receiving 10 percent of the maximum permissible dose as defined in Article 4 of this Chapter, the registrant shall provide additional protective devices as specified by the Agency.
3. An individual shall not be exposed to the useful beam except for a healing arts purpose authorized by a licensed practitioner of the healing arts. The following acts are prohibited:
 - a. Exposure of an individual without meeting the required healing art requirements and without a valid directive from a licensed practitioner;
 - b. Exposure of an individual for training, demonstration, or other non-healing arts purpose;
 - c. Exposure of an individual for the purpose of healing arts screening, except as authorized by the Agency after submitting to the Agency the information listed in Appendix A of this Article. (If any information submitted to the Agency changes, the registrant shall immediately notify the Agency of the changes.);
 - d. Routinely holding film or a patient during an exposure to x-ray radiation; or
 - e. Exposure of an individual to fluoroscopy as a positioning method for general purpose radiological procedures.

4. All persons who are associated with the operation of an x-ray system are subject to the occupational exposure limits specified in Article 4. Exposure of a personnel monitoring device to deceptively indicate a dose delivered to an individual is prohibited.
 5. The registrant shall check radiation protective equipment for reliability and integrity defects on an annual basis, as follows:
 - a. Aprons, gloves, and shields shall be checked for holes, tears, and breaks.
 - b. If defects are found in the equipment, the registrant shall replace or remove it from service. Equipment removed from service shall not be put back into service until it is repaired.
 - c. A record of the annual reliability and integrity check and any equipment replacement shall be maintained for three years.
- B.** The registrant shall maintain the following records for each x-ray machine:
1. Survey, calibration, maintenance, and modification records regarding the x-ray machine or room, which include the name of the person who performed the service; and
 2. Correspondence with the Agency regarding the x-ray machine facility.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-605. X-ray Machine Standards

- A.** A registrant shall prevent leakage radiation from the diagnostic source assembly measured at a distance of 1 meter in any direction from the source assembly from exceeding 25.8 $\mu\text{C}/\text{kg}$ (100 milliroentgens) in one hour when the x-ray tube is operated at its leakage technique factors. The Agency shall determine compliance by obtaining measurements averaged over an area of 100 square centimeters (15.5 square inches) with no linear dimension greater than 20 centimeters (7.9 inches).
- B.** The registrant shall prevent radiation emitted by a component other than the diagnostic source assembly from exceeding 516 nC/kg (2 milliroentgens) in one hour at 5 centimeters from any accessible surface of the component when it is operated in an assembled x-ray system under any conditions for which it was designed. The Agency shall determine compliance by obtaining measurements averaged over an area of 100 square centimeters (15.5 square inches) with no linear dimension greater than 20 centimeters (7.9 inches).
- C.** Beam quality.
1. The registrant shall prevent the useful beam half-value layer (HVL) for diagnostic x-ray given x-ray tube potential from falling below the values shown in Table I. If it is necessary to determine the HVL at an x-ray tube potential that is not listed in Table I, the registrant shall use linear interpolation or extrapolation to make the determination.

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Design operating range (kilovolts peak)	Measured potential (kilovolts peak)	HVL (millimeters of aluminum) Dental Intraoral Units manufactured after December 1, 1980	Medical X-ray Units manufactured before June 10, 2006 and Dental Intraoral Units manufactured on or before December 1, 1980	Medical X-ray Units manufactured on or after June 10, 2006
Below 51	30	1.5	0.3	0.3
	40	1.5	0.4	0.4
	50	1.5	0.5	0.5
51 to 70	51	1.5	1.2	1.3
	60	1.5	1.3	1.5
	70	1.5	1.5	1.8
	Above 70	71	2.1	2.1
Above 70	80	2.3	2.3	2.9
	90	2.5	2.5	3.2
	100	2.7	2.7	3.6
	110	3.0	3.0	3.9
	120	3.2	3.2	4.3
	130	3.5	3.5	4.7
	140	3.8	3.8	5.0
	150	4.1	4.1	5.4

- 2. If the registrant demonstrates that the aluminum equivalent of the total filtration in the primary beam is not less than that shown in Table II, the registrant is considered to have met the criteria in subsection (C)(1).

Table II - Filtration Required vs. Operating Voltage

<i>Operating Voltage (kVp)</i>	<i>Total Filtration (inherent plus added) (millimeters aluminum equivalent)</i>
Below 51	0.5 millimeters
51 - 70	1.5 millimeters
Above 70	2.5 millimeters

- 3. The registrant shall use beryllium window tubes that have a minimum of 0.5 millimeters aluminum equivalent filtration permanently mounted in the useful beam.
- 4. For capacitor energy storage equipment, the Agency shall determine compliance with the maximum quantity of charge per exposure.
- 5. When determining the minimum aluminum equivalent filtration, the registrant shall include the filtration contributed by all materials that are always present between the focal spot of the tube and the patient (for example, a tabletop when the tube is mounted "under the table" and inherent filtration of the tube).
- D. Multiple tubes. If two or more radiographic tubes are controlled by one exposure switch, the operator shall clearly indicate which tube or tubes have been selected before initiation of the exposure, activating one light on the x-ray control panel and a second light at or near the tube housing assembly, each indicating the tube or tubes that have been selected.
- E. Mechanical support of tube head. The registrant shall adjust the tube housing assembly supports so that the tube housing assembly will remain stable during an exposure, unless the tube housing movement is a designed function of the x-ray system.

- F. Exposure reproducibility. The coefficient of variation shall not exceed 0.10 when all technique factors are held constant. This requirement is satisfied if the value of the average exposure (E) is greater than or equal to five times the difference between the maximum exposure (Emax) and minimum exposure (Emin) when four exposures are made at identical technique factors, $[E \geq 5(E_{max} - E_{min})]$.
- G. Accuracy deviation. A registrant shall not use an x-ray machine if the measured technique factors for kVp and time duration are not within the limits specified by the manufacturer. In the absence of the manufacturer's specifications, a registrant shall not use an x-ray machine if the measured kVp is not within 10 percent of the indicated kVp value and the measured time duration is not within 20 percent of the indicated time.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsections (A) and (B) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-606. Fluoroscopic and Fluoroscopic Treatment Simulator Systems

- A. Useful beam limitation. A registrant shall:
 1. Provide beam-limiting devices that restrict the entire cross section of the useful beam to less than the area of the primary barrier at any Source-to-Image Receptor Distance (SID);
 2. Ensure that the x-ray field size produced by fluoroscopic systems without image intensification does not extend beyond the visible area of the image receptor at any SID;

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3. Ensure that the x-ray field size produced by fluoroscopic systems with image intensification and automatic shutter control does not exceed the diameter of the image receptor at any SID;
 4. Ensure that the x-ray field size produced by fluoroscopic systems with image intensification and manual shutter control does not exceed the diameter of the image receptor with the fluoroscopic imaging assembly positioned at the maximum usable distance above the table top; and
 5. Ensure that the x-ray field size produced by fluoroscopic systems with image intensification and manual shutter control, where the fluoroscopic tube is above the table top, does not exceed the diameter of the image receptor with the shutters open to the fullest extent, and at the maximum SID which the fluoroscopic tube is capable of producing radiation.
- B. Fluoroscopic primary protective barrier.** A registrant shall:
1. Provide the fluoroscopic imaging assembly with a primary protective barrier that always intercepts the entire cross section of the useful beam at any SID.
 2. Ensure that the fluoroscopic tube is not capable of producing radiation unless the primary protective barrier is in a position to intercept the entire cross section of the useful beam.
 3. Ensure that fluoroscopic radiation production automatically terminates if the primary protective barrier is removed from the useful beam.
 4. Ensure that the fluoroscopic primary protective barrier meets the following requirements for attenuation of the useful beam:
 - a. For equipment installed before November 15, 1967, the required lead equivalent of the barrier is not less than 1.5 millimeters for fluoroscopes that produce less than 100 kVp, 1.8 millimeters for fluoroscopes that produce at least 100 kVp but less than 125 kVp, and 2.0 millimeters for fluoroscopes that produce 125 or more kVp. (For conventional fluoroscopes, these requirements may be assumed to have been met if the exposure rate measured at the viewing surface of the fluorescent screen does not exceed 12.9 microcoulombs per kilogram (50 milliroentgens) per hour with the screen in the primary beam of the fluoroscope without a patient, under normal operating conditions.) For equipment installed or reinstalled, the required lead equivalent of the barrier is 2.0 millimeters for fluoroscopes that produce less than 125 kVp or 2.7 millimeters for fluoroscopes that produce 125 or more kVp.
 - b. For fluoroscopic systems that use image intensification, the exposure rate, due to transmission through the primary protective barrier, does not exceed 516 nC/kg (2 milliroentgens) per hour at 10 centimeters (4 inches) from any accessible surface of the fluoroscopic imaging assembly, beyond the plane of the image receptor for each 258 μ C/kg (1 roentgen) per minute of entrance exposure rate.
 - c. Compliance with subsections (B)(4)(a) and (b) is determined with the image receptor positioned 35.5 centimeters (14 inches) from the panel or table top, at normal operating technical factors and with the attenuation block in the useful beam for systems with image intensification.
- C. Entrance exposure rate limits.** A registrant shall ensure that:
1. The exposure rate, measured at the point where the center of the useful beam enters the patient does not exceed 2.6 mC/kg (10 roentgens) per minute at any combination of tube potential and current, except during recording of fluoroscopic images or if provided with optional high-level control.
2. If provided with optional high-level control, the equipment is not operable at any combination of tube potential and current that will result in an exposure rate in excess of 2.6 mC/kg (10 roentgens) per minute at the point where the center of the useful beam enters the patient, unless the high-level control is activated, in which case an exposure rate in excess of 5.2 mC/kg (20 roentgens) per minute is prohibited.
 - a. Special means of activation of high-level controls, such as additional pressure applied continuously by the operator, are required to avoid accidental use.
 - b. A continuous signal audible to the fluoroscopist is required to indicate that the high-level control is being employed.
 3. The Agency shall determine compliance with subsections (C)(1) and (2) as follows:
 - a. Remove grids and compression devices from the useful beam during the measurement;
 - b. If the source is below the table, measure the exposure rate 1 centimeter above the table top or cradle; and
 - c. If the source is above the table, measure the exposure rate 30 centimeters (11.8 inches) above the table top with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement;
 - d. For fluoroscopy involving a mobile C-arm x-ray system, measure the exposure rate 30 centimeters (11.8 inches) from the input surface of the fluoroscopic imaging assembly;
 - e. For fluoroscopy involving a C-arm x-ray system, measure the exposure rate 30 centimeters (11.8 inches) from the input surface of the fluoroscope imaging assembly, with the x-ray source positioned at any available SID, provided that the end of the beam-limiting device or spacer is not closer than 30 centimeters (11.8 inches) from the input surface of the fluoroscopic image assembly; and
 - f. For a lateral fluoroscope, measure the exposure rate 15 centimeters (5.9 inches) from the centerline of the x-ray table and in the direction of the x-ray source with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters (5.9 inches) to the centerline of the x-ray table.
- D.** The registrant shall ensure that the source-to-skin distance is not less than:
1. 38 centimeters (15 inches) on stationary fluoroscopes installed after January 2, 1996;
 2. 35.5 centimeters (14 inches) on stationary fluoroscopes which are in operation before January 2, 1996;
 3. 30 centimeters (11.8 inches) on all mobile fluoroscopes; and
 4. 20 centimeters (8 inches) for image-intensified fluoroscopes used for a specific surgical application. The registrant shall follow any precautionary measures in the users operating manual.
- E.** Each fluoroscopic system installation is subject to all of the following requirements for the control of stray radiation. A registrant shall:

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1. Provide a shielding device of at least 0.25 millimeter lead equivalent for covering the Bucky-slot during fluoroscopy;
 2. Except for fluoroscopy performed using portable or mobile C-arm x-ray systems or during surgical procedures or cardiac catheterization, provide protective drapes, or hinged or sliding panels of at least 0.25 millimeters lead equivalent, between the patient and fluoroscopist to intercept scattered radiation that would otherwise reach the fluoroscopist and others near the machine, but not substitute drapes and panels for a protective apron; and
 3. Ensure that protective aprons of at least 0.25 millimeter lead equivalent are worn in the fluoroscopy room by each person, except the patient, whose body is likely to be exposed to 50 μ Sv/hr (5 mR/hr) or more.
- F. Exposure control.** A registrant shall:
1. Ensure that activation of the fluoroscopic tube is controlled by a "dead-man" switch;
 2. Provide a manual reset cumulative timing device, which is activated only during production of radiation in the fluoroscopic mode, to indicate elapsed time by an audible signal or terminate production of radiation;
 3. Provide a device for exposure control in the "spot film" mode that terminates exposure either automatically, or after a preset time interval, preset number of pulses, preset product of current and time, or preset exposure; and
 4. Ensure that the x-ray tube potential and current are continuously indicated.
- G.** A registrant shall provide systems used for mobile fluoroscopy with image intensification.
- H.** Fluoroscopic treatment simulators. Simulators are exempt from subsections (A) through (G). A registrant shall:
1. Use a beam limiting device that restricts the beam to the area of clinical interest.
 2. Include and label devices for settings or physical factors, such as kVp, mA, or exposure time on the control panel;
 3. Ensure that the fluoroscopic exposure switch or switches are of the "deadman" type;
 4. Ensure that each person whose presence is necessary is in the simulator room during exposure and protected with a lead apron of at least 0.5 millimeter lead equivalent or a portable shield. Any person who places their hands in the useful x-ray beam shall wear leaded gloves; and
 5. Ensure that the operator stands behind a barrier and is able to observe the patient during simulator exposures.
- Historical Note**
- Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-606 repealed, new Section R12-1-606 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).
- R12-1-607. Additional X-ray Machine Standards, Shielding Requirements, and Procedures, Except Mobile Fluoroscopic, Dental Panoramic, Cephalometric, Dental CT, or Dental Intra-oral Radiographic Systems**
- A.** Useful beam limitation. A registrant shall:
1. Provide a means to restrict the useful beam to the area of clinical interest for any combination of SID and image receptor size employed.
 2. Ensure that beam-limiting devices meet the following requirements:
 - a. Devices that project a circular radiation field restrict the diameter of the useful beam, not to exceed the diagonal dimension of the image receptor by greater than 2 percent of the SID;
 - b. Devices that project a rectangular or square radiation field restrict the useful beam to the longitudinal and transverse dimensions of the image receptor to within 2 percent of the SID;
 - c. Beam limiting devices that do not incorporate light beams to define the projected radiation field are clearly labeled, indicating the SID and image receptor size at which each device complies with the applicable requirements of subsection (A)(2)(a) or (b);
 - d. Adjustable beam-limiting devices installed after July 31, 1971, incorporate light beams to define the projected dimensions of the useful beam and provide an average illumination of not less than 100 lux (9 foot-candles) at 1 meter (3.3 feet) or at the maximum SID, whichever is less. The average illumination shall be based upon measurements made in the approximate center of each quadrant of the light field; and
 - e. All beam-limiting devices installed, on general purpose fixed and mobile radiographic systems, provide stepless means of continuous adjustment of the projected radiation field size.
 3. Provide a means to align the center of the radiation field to the center of the image receptor to within 2 percent of the SID.
- B.** Radiation exposure control. A registrant shall:
1. Provide a means to terminate the exposure at a preset time interval, preset product of current and time, preset number of pulses, or a preset exposure to the image receptor. The registrant shall ensure that it is not possible to make an exposure when the exposure control device is set to a "zero" or "off" position if either position is provided.
 2. Ensure that the exposure switch is a "dead-man" switch, and except for those used with "spot-film" devices in fluoroscopy, is arranged so that it cannot be conveniently operated outside a shielded area.
 3. Provide x-ray systems with automatic exposure control, which indicates at the control panel when this mode is selected, and a visual and audible signal, which indicates termination of the exposure.
 4. Use a control panel that includes:
 - a. A device (usually a milliamp meter) that will give a positive indication during radiation production; and
 - b. Control setting indicators or meters that indicate the appropriate technical factors: kVp, mAs, mA, or exposure time, and any special mode selected for the exposure.
- C.** Structural shielding. A registrant shall:
1. Ensure that all wall, floor and ceiling areas struck by the useful beam have primary protective barriers. Primary protective barriers in walls shall extend from the finished floor to a minimum height of 2.13 meters (7 feet);
 2. Ensure that secondary protective barriers are provided in all wall, floor, and ceiling areas that do not have primary protective barriers or where the primary protective barrier

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requirements are lower than the secondary barrier requirements;

3. Ensure that the operator's station is behind a protective barrier sufficient to ensure compliance with R12-1-408, R12-1-414, and R12-1-416, and the operator is able to communicate with the patient from the operator's station.
 4. Provide a window of transparent material equal in attenuation to that required by the adjacent barrier, or a mirror system, that is large enough and placed so that the operator can see the patient during exposure without having to leave the protected area.
- D. Operating procedures.** A registrant shall:
1. Use mechanical supporting or restraining devices, if a patient must be held in position for radiography. If the patient must be held by an individual, the registrant shall ensure that the individual is protected with appropriate shielding devices, such as protective gloves and apron, and is positioned so that no part of the body of the individual holding the patient is struck by the useful beam;
 2. Ensure that only individuals required for the radiographic procedure are in the radiographic room during exposure, and, except for the patient, all these individuals are equipped with protective devices;
 3. Restrict the useful beam to the clinical area of interest;
 4. Provide a chart in the vicinity of the diagnostic x-ray system's control panel that specifies, for all routine examinations performed with the system, the following information:
 - a. Patient's anatomical size and technique factors;
 - b. Type and size of the film or film screen combination;
 - c. Type and focal distance of the grid, if any;
 - d. X-ray source-to-image receptor distance; and
 - e. Type and location of gonad shielding.
 5. Provide documentation of the following items:
 - a. The patient's identity;
 - b. The x-ray examination, as recorded in a radiographic log;
 - c. The date the examination is performed;
 - d. The number of projections (if applicable), or on-time, or dose factors depending upon the unit; and
 - e. A method of identifying the individual who performed the examination.
 6. The registrant shall maintain in chronological order, the documentation required in subsection (D)(5) in written or readily available electronic form. The documentation shall be maintained for three years from the date the examination is performed.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-607 repealed, new Section R12-1-607 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-608. Mobile Diagnostic Radiographic and Mobile Fluoroscopic Systems, Except Dental Panoramic, Cephalometric, Dental CT, or Dental Intraoral Radiographic Systems**A. Equipment**

1. All requirements of R12-1-607(A) and (B) apply.
2. For mobile radiographic units the registrant shall provide a "dead-man" switch, together with an electrical cord of sufficient length so that the operator can stand out of the

useful beam and at least 1.82 meters (6 feet) from the patient during all x-ray exposures.

3. A registrant shall ensure that a cone, spacer frame, or inherent provision is made so that the equipment is not operated at source-skin distances of less than 20.3 centimeters (8 inches).
- B. Structural shielding.** If a mobile unit is used routinely in one location, it is considered a fixed installation subject to the shielding requirements in R12-1-603(C), and R12-1-607(C).
- C. Operating procedures**
1. All provisions of R12-1-607(D) apply.
 2. An individual who operates a mobile x-ray system shall comply with R12-1-419(B).

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsections (A) and (C) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-609. Chest Photofluorographic Systems

Use of chest photofluorographic systems for diagnosis of human disease is prohibited.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsections (A) and (C) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-610. Dental Intraoral Radiographic Systems**A. Equipment.** A registrant shall:

1. Use a protective tube housing of diagnostic type;
2. Use diaphragms or cones for restricting the useful beam and to provide the same degree of protection as the housing. The diameter of the useful beam at the end of the cone or spacer frame shall not be more than 7.6 centimeters (3 inches) for intraoral radiography;
3. Ensure that a cone or spacer frame provides a source-to-skin distance of not less than 17.8 centimeters (7 inches) with apparatus operating above 50 kVp or 10 centimeters (4 inches) with apparatus operating at 50 kVp or below for intraoral radiography;
4. Provide a timer to terminate the exposure at a preset time interval, a preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor;
5. Ensure that it is not possible to make an exposure if the timer is set to the "zero" or "off" position;
6. Ensure that the tube head remains stationary if placed in the exposure position;
7. Ensure that the exposure initiating device is a "dead-man" switch; and
8. Use a control panel that includes:
 - a. A means to provide visual or audible indication, detectable at or from the operator's position, during x-ray production or exposure termination; and
 - b. Indication of technique factors for kVp, mA, exposure time, and any special mode that may be selected for the exposure.

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9. Use technique factors, where deviation of measured values from indicated values for kVp and exposure time do not exceed the limits specified by the manufacturer. In the absence of the manufacturer's specifications, the deviation shall not exceed plus or minus 10 percent of the indicated value for kVp and plus or minus 20 percent for exposure time duration.
 10. For a digital system that uses an electronic sensor, use digital radiography techniques that permit reducing x-ray beam on-time to 25 percent of the exposure time required for "D" speed film or lower, reducing radiation to the patient by the same rate.
 11. For a computed radiography (imaging plate (IP) made of photostimulable phosphor) system that uses an imaging plate, use radiography techniques that permit reducing x-ray beam on-time to 50 percent of the exposure time required for "D" speed film or lower, reducing radiation to the patient by the same rate.
- B. Structural shielding.** The registrant shall:
1. Provide dental installations with primary and secondary barriers to ensure compliance with the personnel exposure requirements in Article 4 of this Chapter; (Note: In many cases, structural materials of ordinary walls suffice as a protective barrier without addition of special shielding material.)
 2. Install primary protective barriers between rooms or areas if dental x-ray units are used in adjacent rooms or areas;
 3. Provide each installation with a protective barrier for the operator or arrange the installation so that the operator can stand at least 1.82 meters (6 feet) from the patient and well away from the useful beam;
 4. Arrange the operator's position to allow visual contact with the patient during exposure; and
 5. Comply with fixed installation requirements, if a mobile unit is used routinely in one location.
- C. Operating procedures**
1. A dentist or other persons shall not hold patients or films during exposure. Only persons required for the radiographic procedure are allowed in the radiographic room during exposures.
 2. An operator shall stand at least 1.82 meters (6 feet) from the patient or behind a protective barrier during each exposure.
 3. An operator shall ensure that only the patient is in the useful beam.
 4. The licensed practitioner or other person shall not hold the tube housing or the cone during the exposure.
 5. A registrant shall not perform dental fluoroscopy without an image intensifier.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective August 8, 1986 (Supp. 86-4). Amended January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-610.01. Hand-held Intraoral Dental Radiographic Unit Requirements For Use

- A.** Registrants are subject to the following requirements for Intraoral dental radiographic units designed to be operated as a hand-held unit:
1. For all uses:

- a. Operators of hand-held intraoral dental radiographic units shall be specifically trained to operate such equipment.
 - b. A hand-held intraoral dental radiographic unit shall be held without any motion during a patient examination. A tube stand may be utilized to immobilize a hand-held intraoral dental radiographic unit during patient examination.
 - c. The operator shall ensure there are no bystanders within a radius of at least six feet from the patient being examined with a hand-held intraoral radiographic unit.
- 2.** Additional requirements for operatories in permanent facilities:
- a. Hand-held intraoral dental radiographic units shall be used for patient examinations in dental operatories that meet the structural shielding requirements specified by the Agency or by a qualified health or medical physicist.
 - b. Hand-held intraoral dental radiographic units shall not be used for patient examinations in hallways and waiting rooms.
- B.** Hand-held units may only be used in a manner as specified on the registration issued by the Agency.

Historical Note

New Section R12-1-610.01 made by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-611. Therapeutic X-ray Systems of Less Than 1 MeV

- A.** Equipment requirements.
1. Leakage radiation. When the x-ray tube is operated at its maximum rated tube current for the maximum kVp, the leakage air kerma rate shall not exceed the value specified at the distance specified for that classification of therapeutic radiation machine. For each therapeutic radiation machine, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified:
 - a. 5-50 kVp Systems. The leakage air kerma rate measured at any position 5 centimeters from the tube housing assembly shall not exceed 1 mGy (100 mrad) in any one hour.
 - b. Greater than 50 kVp and less than 1MeV Systems. The leakage air kerma rate measured at a distance of 1 meter from the target in any direction shall not exceed 1 centigray (1 rad) in any 1 hour. This air kerma rate measurement may be averaged over areas no larger than 100 square centimeters (100 cm²). In addition, the air kerma rate at a distance of 5 centimeters from the surface of the tube housing assembly shall not exceed 30 centigray (30 rad) per hour.
 2. Permanent beam limiting devices. A registrant shall ensure that fixed diaphragms or cones used for limiting the useful beam provide the same or higher degree of attenuation as required for the tube housing assembly.
 3. Removable and adjustable beam-limiting devices. A registrant shall ensure that:
 - a. Removable and adjustable beam-limiting devices, for the portion of the useful beam to be blocked by these devices, transmit not more than 1 percent of the original x-ray beam at the maximum kilovoltage and maximum treatment filter; and
 - b. When adjustable beam limiting devices are used, the position and shape of the radiation field shall be indicated by a light beam.

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4. Filter system. A registrant shall ensure that the filter system is designed so that:
 - a. Filters cannot be accidentally displaced from the useful beam at any possible tube orientation;
 - b. For equipment installed after January 1, 2011, an interlock system prevents irradiation if the proper filter is not in place;
 - c. The air kerma rate escaping from the filter slot shall not exceed 1 centiGray (1 rad) per hour at one (1) meter under any operating conditions; and
 - d. Each filter is marked regarding its material of construction and its thickness or wedge angle for wedge filters.
 5. X-ray tube immobilization. A registrant shall ensure that the tube housing assembly is capable of being immobilized during stationary treatments and the x-ray tube shall be so mounted that it cannot accidentally turn or slide with respect to the housing aperture.
 6. Focal spot marking. A registrant shall ensure that the tube housing assembly is marked so that it is possible to determine the location of the focal spot to within 5 millimeters, and the marking is readily accessible for use during calibration procedures.
 7. Therapy treatment timers. A registrant shall:
 - a. Provide a timer that has a display at the treatment control panel. The timer shall have a preset time selector and an elapsed time indicator;
 - b. Ensure that the timer is a cumulative timer that activates with the radiation, retains its reading after irradiation is interrupted or terminated, and requires the operator to reset the preset time selector after irradiation is terminated and before irradiation can be reinitiated;
 - c. Ensure that the timer terminates irradiation when a preselected time has elapsed;
 - d. Ensure that the timer permits accurate presetting and determination of exposure times as short as one second;
 - e. Ensure that the timer does not permit an exposure if set at zero; and
 - f. Ensure that the timer does not activate until the shutter is opened if irradiation is controlled by a shutter mechanism.
 8. Control panel functions. In addition to the displays required in other provisions of this Section, a registrant shall ensure that a control panel has:
 - a. An indication of whether electrical power is available at the control panel and if activation of the x-ray tube is possible;
 - b. An indication of whether x-rays are being produced;
 - c. A means for indicating kVp and x-ray tube current;
 - d. A means for terminating an exposure at any time;
 - e. A locking device that will prevent unauthorized use of the x-ray system; and
 - f. For x-ray equipment installed after January 2, 1996, a positive display of specific filters in the beam.
 9. Multiple tubes. If one control panel is used to energize more than one x-ray tube a registrant shall ensure that:
 - a. It is possible to activate only one x-ray tube during any time interval,
 - b. There is an indication at the control panel that identifies which x-ray tube is energized, and
 - c. There is an indication at the tube housing assembly when that tube is energized.
 10. Source-to-patient distance. A registrant shall ensure that there is a means of determining the source-to-patient distance to within 1 centimeter.
 11. Shutters. Unless it is possible to bring the x-ray output to the prescribed exposure parameters within five seconds, a registrant shall ensure that the entire useful beam is automatically attenuated by a shutter with a lead equivalency not less than that of the tube housing assembly. In addition the registrant shall ensure that:
 - a. After the unit is at operating parameters, the operator controls the shutter electrically from the control panel; and
 - b. An indication of shutter position appears at the control panel.
 12. Low filtration x-ray tubes. A registrant shall ensure that each x-ray system equipped with a beryllium or other low-filtration window is clearly labeled as low-filtration equipment on the tube housing assembly and at the control panel.
- B. Facility design requirements.** In addition to shielding necessary to meet the requirements of Article 4 of this Chapter, a registrant shall ensure that:
1. Warning lights. A treatment room to which access is possible through more than one entrance has a warning light, in a readily observable position near the outside of any access doors, which will indicate when the useful beam is "on."
 2. Voice communication. Two-way oral communication is possible between the patient and the operator at the control panel; or where excessive noise levels make oral communication impractical, another effective method of communication.
 3. Viewing systems. Windows, mirrors, closed-circuit television, or an equivalent system, permits continuous observation of the patient during irradiation and is located so that the operator can observe the patient from the control panel. If the primary viewing system is by electronic means (for example, television), the registrant shall have an alternate viewing system for use in the event of electronic failure.
 4. Systems above 150 kVp. For treatment rooms that contain an x-ray system capable of operating above 150 kVp a registrant shall ensure that:
 - a. All necessary shielding, except for any beam interceptor, is provided by fixed barriers;
 - b. The control panel is within a protective booth equipped with an interlocked door, or located outside the treatment rooms;
 - c. All doors of the treatment room are electrically connected to the control panel so that x-ray production cannot occur unless all doors are closed; and
 - d. Opening of any door to the treatment room during exposure results in automatic termination of x-ray production or reduction of radiation levels to an average of no more than 516 nC/kg (2 milliroentgens) per hour and a maximum of 2.6 μ C/kg (10 milliroentgens) per hour at a distance of 1 meter (3.3 feet) from the target in any direction, and restoration of the machine to full operation is possible only from the control panel after the termination or reduction.
- C. Surveys.** A registrant shall ensure that:
1. All facilities, both new and existing, or not previously surveyed, are surveyed before being put into service for the treatment of patients by, or under the direction of, a person trained and experienced in the principles of radia-

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- tion protection, and perform additional surveys of a facility after any change in the facility or a facility's equipment that might cause a significant increase in radiation hazard, before being put into service for the treatment of patients.
2. The person conducting the survey reports the survey findings in writing to the individual in charge of the facility and maintains a copy of the survey report for inspection by the Agency.
 3. The installation is operated in compliance with any limitations indicated by the protection survey required by subsection (C)(1).
- D. Calibrations.** A registrant shall ensure that:
1. The calibration of a therapeutic x-ray system includes, but is not limited to, the following determinations:
 - a. Verification that the x-ray system is operating in compliance with the design specifications;
 - b. The dose rate equivalent for each combination of field size, technique factors, filter, and treatment distance used;
 - c. The degree of congruence between the radiation field and the field indicated by the localizing device if a localizing device is used; and
 - d. An evaluation of the uniformity of the radiation field symmetry for the field sizes used and any dependence upon source housing assembly orientation;
 2. The calibration of an x-ray system is performed at intervals not to exceed annually and after any change or replacement of components that could cause a change in the radiation output;
 3. The calibration of the radiation output of the x-ray system is performed by, or under the direction of, a person trained and experienced in performing calibrations, who is physically present at the facility during calibration;
 4. Calibration of the radiation output of an x-ray system is performed with a calibrated instrument. The registrant shall ensure that calibration of the instrument is directly traceable to the National Institute of Standards and Technology (NIST) and that the instrument has been calibrated within the preceding 24 months;
 5. Records of calibration performed under subsection (D)(3) are maintained for at least three years after completion of the calibration and are made available for inspection by the Agency; and
 6. A copy of the most recent calibration is available for use by the operator at the control panel.
- E. Spot checks.** A registrant shall ensure that spot checks are performed on therapeutic x-ray systems capable of operation at greater than 150 kVp. The registrant shall ensure that spot checks meet the following requirements:
1. The spot-check procedures are in writing and have been developed by a qualified expert;
 2. The measurements taken during the spot checks demonstrate the degree of consistency of the operating characteristics that can affect the radiation output of the x-ray system;
 3. The written spot-check procedure specifies the frequency of the tests or measurements, made at intervals not to exceed monthly;
 4. The spot-check procedure identifies conditions that require recalibration of the system in accordance with subsection (D)(1); and
 5. Records of spot-check measurements performed as required by subsection (E)(3) are maintained, available for inspection by the Agency, for three years following the measurements.
- F. Operating procedures.** A registrant shall ensure that:
1. Therapeutic x-ray systems are not left unattended unless the system is secured according to subsection (A)(8)(e);
 2. If a patient must be held in position for radiation therapy, mechanical supporting or restraining devices are used;
 3. The tube housing assembly is not held by an individual during exposures; and
 4. At 150 kVp or more the patient is the only person in the treatment room during production of radiation. At less than 150 kVp an individual may be in the room with patient, provided the individual is protected by a barrier sufficient to meet the requirements of Article 4 of this Chapter.
- G. Electronic Brachytherapy units** are exempt from the requirements of this Section.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-611 repealed, new Section R12-1-611 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-611.01. Electronic Brachytherapy to Deliver Interstitial and Intracavity Therapeutic Radiation Dosage

- A.** Electronic brachytherapy devices used to deliver interstitial and intracavity therapeutic radiation dosage shall be subject to the requirements of this Section, and unless otherwise specified in this Section shall be exempt from the requirements of R12-1-611.
1. An electronic brachytherapy device that does not meet the requirements of this Section shall not be used for irradiation of patients; and
 2. An electronic brachytherapy device shall only be utilized for human use applications specifically approved by the U.S. Food and Drug Administration (FDA), unless participating in a research study approved by the registrant's Institutional Review Board (IRB).
- B.** Each facility location authorized to use an electronic brachytherapy device in accordance with this Section shall possess appropriately calibrated portable monitoring equipment. At a minimum, such equipment shall include a portable survey instrument capable of measuring dose rates over the range 10 μ Sv (1 mrem) per hour to 10 mSv (1000 mrem) per hour. The survey instrument shall be capable of measuring as low as 10 μ Sv (1 mrem) per hour in the energy range of the electronic brachytherapy unit for which the survey instrument is to be used. Published correction factors utilized in conjunction with the instrument's readings may be used to achieve sensitivity. The survey instrument or instruments shall be operable and calibrated before first use, at intervals not to exceed 12 months, and after survey instrument repairs.
- C. Facility Design Requirements for Electronic Brachytherapy Devices.** In addition to shielding adequate to meet requirements of R12-1-603(C), the treatment room shall meet the following design requirements:
1. If applicable, provision shall be made to prevent simultaneous operation of more than one therapeutic radiation machine in a treatment room.
 2. Access to the treatment room shall be controlled by a door at each entrance.
 3. Each treatment room shall have provisions to permit continuous oral communication and visual observation of the

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- patient from the treatment control panel during irradiation. The electronic brachytherapy device shall not be used for patient irradiation unless the patient can be observed.
4. For electronic brachytherapy devices capable of operating below 150 kVp, radiation shielding for the staff in the treatment room may be available, either as a portable shield or as localized shielded material around the treatment site or both, in lieu of the requirements for room shielding. The shielding shall meet the requirements of R12-1-603(C).
 5. For electronic brachytherapy devices capable of operating at or greater than 150 kVp, the facility must meet the requirements of R12-1-611(B)(4).
- D. Control Panel Functions.** The control panel, in addition to the displays required by other provisions in this Section, shall:
1. Provide an indication of whether electrical power is available at the control panel and if activation of the electronic brachytherapy source is possible;
 2. Provide an indication of whether x-rays are being produced;
 3. Provide a means for indicating electronic brachytherapy source potential and current;
 4. Provide the means for terminating an exposure at any time; and
 5. Include an access control (locking) device that will prevent unauthorized use of the electronic brachytherapy device.
- E. Timer.** A suitable irradiation control device (timer) shall be provided to terminate the irradiation after a pre-set time interval or integrated charge on a dosimeter-based monitor.
1. A timer shall be provided at the treatment control panel. The timer shall indicate the planned setting and the time elapsed or remaining;
 2. The timer shall not permit an exposure if set at zero;
 3. The timer shall be a cumulative device that activates with an indication of "BEAM-ON" that retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to reset the elapsed time indicator;
 4. The timer shall terminate irradiation when a pre-selected time has elapsed, if any dose monitoring system has not previously terminated irradiation.
 5. The timer shall permit setting of exposure times as short as 0.1 second; and
 6. The timer shall be accurate to within one percent of the selected value or 0.1 second, whichever is greater.
- F. Qualified Medical Physicist Support.**
1. The services of a Qualified Medical Physicist shall be required in facilities having electronic brachytherapy devices. The Qualified Medical Physicist shall be responsible for:
 - a. Evaluation of the output from the electronic brachytherapy source;
 - b. Generation of the necessary dosimetric information;
 - c. Supervision and review of treatment calculations prior to initial treatment of any treatment site;
 - d. Establishing the periodic and day-of-use quality assurance checks and reviewing the data from those checks as required in subsection (J);
 - e. Consultation with the authorized user in treatment planning, as needed; and
 - f. Performing calculations/assessments regarding patient treatments that may constitute a medical event.
 2. If the Qualified Medical Physicist is not a full-time employee of the registrant, then the operating procedures required by subsection (G) shall also specifically address how the Qualified Medical Physicist is to be contacted for problems or emergencies, as well as the specific actions, if any, to be taken until the Qualified Medical Physicist can be contacted.
- G. Operating Procedures.**
1. Only individuals approved by the authorized user, Radiation Safety Officer, or Qualified Medical Physicist shall be present in the treatment room during treatment;
 2. Electronic brachytherapy devices shall not be made available for medical use unless the requirements of subsections (A), (H), and (I) have been met;
 3. The electronic brachytherapy device shall be inoperable, either by hardware or password, when unattended by qualified staff or service personnel;
 4. During operation, the electronic brachytherapy device operator shall monitor the position of all persons in the treatment room, and all persons entering the treatment room, to prevent entering persons from unshielded exposure from the treatment beam;
 5. If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used;
 6. Written procedures shall be developed, implemented, and maintained for responding to an abnormal situation. These procedures shall include:
 - a. Instructions for responding to equipment failures and the names of the individuals responsible for implementing corrective actions; and
 - b. The names and telephone numbers of the authorized users, the Qualified Medical Physicist, and the Radiation Safety Officer to be contacted if the device or console operates abnormally.
 7. A copy of the current operating and emergency procedures shall be physically located at the electronic brachytherapy device control console;
 8. Instructions shall be maintained with the electronic brachytherapy device control console to inform the operator of the names and telephone numbers of the authorized users, the Qualified Medical Physicist, and the Radiation Safety Officer to be contacted if the device or console operates abnormally; and
 9. The Radiation Safety Officer, or the Radiation Safety Officer's designee, and an authorized user shall be notified immediately if the patient has a medical emergency, suffers injury or dies. The Radiation Safety Officer or the Qualified Medical Physicist shall inform the manufacturer of the event.
- H. Safety Precautions for Electronic Brachytherapy Devices.**
1. Any person in the treatment room, other than the person being treated, shall wear personnel monitoring devices;
 2. An authorized user and a Qualified Medical Physicist shall be physically present during the initiation of all new patient treatments involving the electronic brachytherapy device;
 3. After the first treatment one of the following individuals shall be physically present during continuation of all patient treatments involving the electronic brachytherapy device:
 - a. A Qualified Medical Physicist, or
 - b. An authorized user, or
 - c. A certified therapy technologist (CTT) certified by the Arizona Medical Radiologic Technology Board of Examiners, under the direct supervision of an

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authorized user, who has been trained in the operation and emergency response for the electronic brachytherapy device;

4. When shielding is required by subsection (C)(4), surveys shall be conducted to ensure that the requirements of R12-1-408, R12-1-414, and R12-1-416 are met. Alternatively, a Qualified Medical Physicist shall designate shield locations sufficient to meet the requirements of R12-1-603(C) and R12-1-607(C) for any individual, other than the patient, in the treatment room; and
 5. All personnel in the treatment room are required to remain behind shielding during treatment. A Qualified Medical Physicist shall approve any deviation from this requirement and shall designate alternative radiation safety protocols, compatible with patient safety, to provide an equivalent degree of protection.
- I. Electronic Brachytherapy Source Calibration Measurements.**
1. Calibration of the electronic brachytherapy source output shall be performed by, or under the direct supervision of, a Qualified Medical Physicist. If the control console is integral to the electronic brachytherapy device, the required procedures shall be kept where the operator is located during electronic brachytherapy device operation;
 2. Calibration of the electronic brachytherapy source output shall be made for each electronic brachytherapy source, or after any repair affecting the x-ray beam generation, or when indicated by the electronic brachytherapy source quality assurance checks;
 3. Calibration of the electronic brachytherapy source output shall utilize a dosimetry system appropriate for the energy output of the unit and calibrated by the National Institute for Standards and Technology (NIST) or by an American Association of Physicists in Medicine (AAPM) Accredited Dosimetry Calibration Laboratory (ADCL). The calibration shall have been performed within the previous 24 months and after any servicing that may have affected system calibration;
 4. Calibration of the electronic brachytherapy source output shall include, as applicable, determination of:
 - a. The output within two percent of the expected value, if applicable, or determination of the output if there is no expected value;
 - b. Timer accuracy and linearity over the typical range of use;
 - c. Proper operation of back-up exposure control devices;
 - d. Evaluation that the relative dose distribution about the source is within five percent of that expected; and
 - e. Source positioning accuracy to within one millimeter within the applicator;
 5. Calibration of the x-ray source output required shall be in accordance with current published recommendations from a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of a calibration protocol published by a national professional association, the manufacturer's calibration protocol shall be followed.
 6. The registrant shall maintain a record of each calibration in an auditable form for the duration of the registration. The record shall include: the date of the calibration; the manufacturer's name, model number and serial number for the electronic brachytherapy device and a unique identifier for its electronic instrument or instruments brachytherapy source; the model numbers and serial numbers of the instrument or instruments used to calibrate the electronic brachytherapy device; and the name and signature of the Qualified Medical Physicist responsible for performing the calibration.
- J. Periodic and Day-of-Use Quality Assurance Checks for Electronic Brachytherapy Devices.**
1. Quality assurance checks shall be performed on each electronic brachytherapy device:
 - a. At the beginning of each day of use;
 - b. Each time the device is moved to a new room or site; and
 - c. After each x-ray tube installation.
 2. The registrant shall perform periodic quality assurance checks required in accordance with procedures established by the Qualified Medical Physicist;
 3. To satisfy the requirements of this subsection, radiation output quality assurance checks shall include at a minimum:
 - a. Verification that output of the electronic brachytherapy source falls within three percent of expected values, as appropriate for the device, as determined by:
 - i. Output as a function of time, or
 - ii. Output as a function of setting on a monitor chamber.
 - b. Verification of the consistency of the dose distribution to within three percent (or the manufacturer's or Qualified Medical Physicist's documented recommendation not to exceed five percent), observed at the source calibration required by subsection (I); and
 - c. Validation of the operation of positioning methods to ensure that the treatment dose exposes the intended location within one millimeter; and
 4. The registrant shall use a dosimetry system that has been intercompared within the previous 12 months with the dosimetry system described in this Section to make the quality assurance checks required in subsection (J)(3);
 5. The registrant shall review the results of each radiation output quality assurance check to ensure that:
 - a. An authorized user and Qualified Medical Physicist is immediately notified if any parameter is not within its acceptable tolerance, and the electronic brachytherapy device is not used until the Qualified Medical Physicist has determined that all parameters are within their acceptable tolerances;
 - b. If all radiation output quality assurance check parameters appear to be within their acceptable range, the acceptable quality assurance checklist shall be reviewed and signed by either the authorized user or Qualified Medical Physicist prior to the next patient use of the unit. In addition, the Qualified Medical Physicist shall review and sign the results of each radiation output quality assurance check at intervals not to exceed 30 days.
 6. To satisfy the requirements of subsection (J)(1), safety device quality assurance checks shall, at a minimum, assure:
 - a. Proper operation of radiation exposure indicator lights on the electronic brachytherapy device and on the control console;
 - b. Proper operation of viewing and intercom systems in each electronic brachytherapy facility, if applicable;
 - c. Proper operation of radiation monitors, if applicable;
 - d. The integrity of all cables, catheters or parts of the device that carry high voltages; and
 - e. Connecting guide tubes, transfer tubes, transfer-tube-applicator interfaces, and treatment spacers are

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- free from any defects that interfere with proper operation.
7. If the results of the safety device quality assurance checks required in subsection (J)(6) indicate the malfunction of any system, a registrant shall secure the control console in the OFF position and not use the electronic brachytherapy device except as may be necessary to repair, replace, or check the malfunctioning system.
 8. The registrant shall maintain a record of each quality assurance check required by this Section in a legible form for three years.
 - a. The record shall include the date of the quality assurance check; the manufacturer's name, model number and serial number for the electronic brachytherapy device; the name and signature of the individual who performed the periodic quality assurance check and the name and signature of the Qualified Medical Physicist who reviewed the quality assurance check;
 - b. For radiation output quality assurance checks required by subsection (J)(3), the record shall also include the unique identifier for the electronic brachytherapy source and the manufacturer's name; model number and serial number for the instrument or instruments used to measure the radiation output of the electronic brachytherapy device.
- K. Therapy-related Computer Systems.** The registrant shall perform acceptance testing on the treatment planning system of electronic brachytherapy-related computer systems in accordance with current published recommendations from a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of an acceptance testing protocol published by a national professional association, the manufacturer's acceptance testing protocol shall be followed.
1. Acceptance testing shall be performed by, or under the direct supervision of a Qualified Medical Physicist. At a minimum, the acceptance testing shall include, as applicable, verification of:
 - a. The source-specific input parameters required by the dose calculation algorithm;
 - b. The accuracy of dose, dwell time, and treatment time calculations at representative points;
 - c. The accuracy of isodose plots and graphic displays;
 - d. The accuracy of the software used to determine radiation source positions from radiographic images; and
 - e. If the treatment planning system is different from the treatment delivery system, the accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.
 2. The position indicators in the applicator shall be compared to the actual position of the source or planned dwell positions, as appropriate, at the time of commissioning.
 3. Prior to each patient treatment regimen, the parameters for the treatment shall be evaluated for correctness and approved by the authorized user and the Qualified Medical Physicist through means independent of that used for the determination of the parameters.
- L. Training for e-brachytherapy Authorized Users.**
1. The registrant for any therapeutic radiation machine subject to this Section shall require the authorized user to be a physician who is certified in:
 - a. Radiation oncology or therapeutic radiology by the American Board of Radiology or radiology (combined diagnostic and therapeutic radiology program) by the American Board of Radiology prior to 1976; or
 - b. Radiation oncology by the American Osteopathic Board of Radiology; or
 - c. Radiology, with specialization in radiotherapy, as a British "Fellow of the Faculty of Radiology" or "Fellow of the Royal College of Radiology"; or
 - d. Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or
 2. Is in the active practice of therapeutic radiology, and has completed 200 hours of instruction in basic radiation techniques applicable to the use of an external beam radiation therapy unit, 500 hours of supervised work experience, and a minimum of three years of supervised clinical experience.
 - a. To satisfy the requirement for instruction, the classroom and laboratory training shall include:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of ionization radiation; and
 - iv. Radiation biology.
 - b. To satisfy the requirement for supervised work experience, training shall be under the supervision of an authorized user and shall include:
 - i. Review of the full calibration measurements and periodic quality assurance checks;
 - ii. Evaluation of prepared treatment plans and calculation of treatment times or patient treatment settings or both;
 - iii. Using administrative controls to prevent medical events as described in R12-1-444;
 - iv. Implementing emergency procedures to be followed in the event of the abnormal operation of an external beam radiation therapy unit or console; and
 - v. Checking and using radiation survey meters.
 - c. To satisfy the requirement for a period of supervised clinical experience, training shall include one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user. The supervised clinical experience shall include:
 - i. Examining individuals and reviewing their case histories to determine their suitability for external beam radiation therapy treatment, and any limitations or contraindications or both;
 - ii. Selecting proper dose and how it is to be administered;
 - iii. Calculating the therapeutic radiation machine doses and collaborating with the authorized user in the review of patients' progress and consideration of the need to modify originally prescribed doses or treatment plans as warranted by patients' reaction to radiation or both; and
 - iv. Post-administration follow-up and review of case histories.
 3. Notwithstanding the requirements of this subsection, the registrant for any therapeutic radiation machine subject to this Section may also submit the training of the prospec-

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- tive authorized user physician for Agency review on a case-by-case basis if the training includes substantially equivalent training as that listed in subsection (L)(2) and the training includes dosimetry calculation training and experience.
4. A physician shall not act as an authorized user until such time as the physician's training has been reviewed and approved by the Agency.
- M.** Training for Qualified Medical Physicist. The registrant for any therapeutic radiation machine subject to this Section shall require the Qualified Medical Physicist to:
1. Be certified with the Agency, as a provider of radiation services in the area of calibration and compliance surveys of external beam radiation therapy units; and
 2. Be certified by the American Board of Radiology in:
 - a. Therapeutic radiological physics; or
 - b. Roentgen-ray and gamma-ray physics; or
 - c. X-ray and radium physics; or
 - d. Radiological physics; or
 3. Be certified by the American Board of Medical Physics in Radiation Oncology Physics; or
 4. Be certified by the Canadian College of Physicists in Medicine; or
 5. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university, and have completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of a Qualified Medical Physicist at a medical institution. This training and work experience shall be conducted in clinical radiation facilities that provide high-energy external beam radiation therapy (photons and electrons with energies greater than or equal to one MV/one MeV). To meet this requirement, the individual shall have performed the tasks listed in this subsection under the supervision of a Qualified Medical Physicist during the year of work experience.
- N.** Qualifications of Operators. Individuals who will be operating a therapeutic radiation machine for medical use shall be certified by the Agency as a CTT by the Arizona Medical Radiologic Technology Board of Examiners.
- O.** Additional training requirements.
1. A registrant shall provide instruction, initially and at least annually, to all individuals who operate the electronic brachytherapy device, as appropriate to the individual's assigned duties, in the operating procedures identified in subsection (G). If the interval between patients exceeds one year, retraining of the individuals shall be provided.
 2. In addition to the requirements of subsection (L) for therapeutic radiation machine authorized users and subsection (M) for Qualified Medical Physicists, these individuals shall also receive device-specific instruction initially from the manufacturer, and annually from either the manufacturer or other qualified trainer. The training shall be of a duration recommended by a recognized national professional association with expertise in electronic brachytherapy (when available). In the absence of any training protocol recommended by a national professional association, the manufacturer's training protocol shall be followed. The training shall include, but not be limited to:
 - a. Device-specific radiation safety requirements;
 - b. Device operation;
 - c. Clinical use for the types of use approved by the FDA;
 - d. Emergency procedures, including an emergency drill; and
 - e. The registrant's quality assurance program.
 3. A registrant shall retain a record of individuals receiving manufacturers instruction for three years. The record shall include a list of the topics covered, the date of the instruction, the name or names of the attendee or attendees, and the name or names of the individual or individuals who provided the instruction.
- P.** Mobile Electronic Brachytherapy Service. A registrant providing mobile electronic brachytherapy service shall, at a minimum:
1. Check all survey instruments before medical use at each address of use or on each day of use, whichever is more restrictive;
 2. Account for the electronic brachytherapy x-ray tube in the electronic brachytherapy device before departure from the client's address; and
 3. Perform, at each location on each day of use, all of the required quality assurance checks specified in this Section to assure proper operation of the device.
- Q.** Medical events shall be reported to the Agency. For purposes of this Section "medical event" means a therapeutic radiation dose from a machine:
1. Delivered to the wrong patient;
 2. Delivered using the wrong mode of treatment;
 3. Delivered to the wrong treatment site; or
 4. Delivered in one week to the correct patient, using the correct mode, to the correct therapy site, but greater than 130 percent of the prescribed weekly dose; or
- R.** A therapeutic radiation dose from a machine with errors in the calibration, time of exposure, or treatment geometry that result in a calculated total treatment dose differing from the final, prescribed total treatment dose by more than 20 percent, except for treatments given in 1 to 3 fractions, in which case a difference of more than 10 percent constitutes a medical event.
- S.** Reports of therapy medical events:
1. Within 24 hours after discovery of a medical event, a registrant shall notify the Agency by telephone by speaking to an Agency staff member. The registrant shall also notify the referring physician of the affected patient and the patient or a responsible relative or guardian, unless the referring physician personally informs the registrant either that he or she will inform the patient, or that in his or her medical judgment, telling the patient or the patient's responsible relative or guardian would be harmful to one or the other, respectively. If the Agency staff member, referring physician, or the patient's responsible relative or guardian cannot be reached within 24 hours, the registrant shall notify them as soon as practicable. The registrant shall not delay medical care for the patient because of notification problems.
 2. Within 15 days following the verbal notification to the Agency, the registrant shall report, in writing, to the Agency and individuals notified under subsection (S)(1). The written report shall include the registrant's name, the referring physician's name, a brief description of the event, the effect on the patient, the action taken to prevent recurrence, whether the registrant informed the patient or the patient's responsible relative or guardian, and if not, why not. The report shall not include the patient's name or other information that could lead to identification of the patient.
 3. Each registrant shall maintain records of all medical events for Agency inspection. The records shall:

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- a. Contain the names of all individuals involved in the event, including:
 - i. The physician,
 - ii. The allied health personnel,
 - iii. The patient,
 - iv. The patient's referring physician,
 - v. The patient's identification number if one has been assigned,
 - vi. A brief description of the event,
 - vii. The effect on the patient, and
 - viii. The action taken to prevent recurrence.
- b. Be maintained for three years beyond the termination date of the affected registration.

Historical Note

New Section R12-1-611.01 made by final rulemaking at 20 A.A.R. 811, effective May 3, 2014 (Supp. 14-1).

R12-1-611.02. Other Use of Electronically-Produced Radiation to Deliver Superficial Therapeutic Radiation Dosage

A person shall not utilize any device which is designed to electrically generate a source of ionizing radiation to deliver superficial therapeutic radiation dosage, and which is not appropriately regulated under any existing category of therapeutic radiation machine, until:

1. The applicant or registrant has, at a minimum, provided the Agency with:
 - a. A detailed description of the device and its intended application or applications;
 - b. Facility design requirements, including shielding and access control;
 - c. Documentation of appropriate training for authorized user physician or physicians and qualified medical physicist or physicists;
 - d. Methodology for measurement of dosages to be administered to patients or human research subjects;
 - e. Documentation regarding calibration, maintenance, and repair of the device, as well as instruments and equipment necessary for radiation safety;
 - f. Radiation safety precautions and instructions; and
 - g. Other information requested by the Agency in its review of the application; and
2. The applicant or registrant has received written approval from the Agency to utilize the device in accordance with the regulations and specific conditions the Agency considers necessary for the medical use of the device; and
3. The applicant or registrant has submitted the application information and forms required by Article 2.
4. In addition to the requirements of this Section, a registrant using a device for x-ray radiation therapy shall meet the requirements of R12-1-611.01(Q), (R), and (S).

Historical Note

New Section R12-1-611.02 made by final rulemaking at 20 A.A.R. 811, effective May 3, 2014 (Supp. 14-1).

R12-1-612. Computed Tomography Systems**A. Definitions:**

1. "CT" means computed tomography.
2. "CT conditions of operation" means all selectable parameters governing the operation of a CT including nominal tomographic section thickness, and technique factors.
3. "CTDI" means computed tomography dose index, the integral of the dose profile along a line perpendicular to the tomographic plane divided by the product of the nominal tomographic thickness and the number of tomogram produced in a single scan.
4. "CTDI vol" means a value of a volume-weighted tomography dose index. The unit of the CTDI vol is Gray or

subunits of the Gray. The value of the CTDI vol for patient scan is used to trigger a notification when the value exceeds or will exceed a threshold value.

5. "CTN" means CT number, the number used to represent the x-ray attenuation associated with each elemental area of the CT image.
 6. "Dose profile" means the dose as a function of position along a line.
 7. "DLP" means the dose-length product. The DLP is the mathematical product of the CTDI vol and the length of the scan. The unit DLP is the Gray-cm of subunits of the Gray-cm. The DLP is used to trigger a notification when the value exceeds or will exceed a threshold value.
 8. "Elemental area" means the smallest area within a tomogram for which the x-ray attenuation properties of a body are depicted.
 9. "Multiple tomogram system" means a CT system that obtains x-ray transmissions data simultaneously during a single scan to produce more than one tomogram.
 10. "Nominal tomographic section thickness" means the full width at half-maximum of the sensitivity profile taken at the center of the cross section volume over which x-ray transmission data are collected.
 11. "Reference plane" means a plane that is displaced from and parallel to the tomographic plane.
 12. "Scan" means the complete process of collecting x-ray transmission data for the production of a tomogram. Data can be collected simultaneously during a single scan for the production of one or more tomograms.
- B. Facility:** A registrant shall ensure that a CT facility has:
1. An operable two-way communication system between the patient and the operator in each CT room.
 2. A viewing system that will allow the operator to continuously view the patient from the control panel during each examination. If the viewing system malfunctions the CT shall not be used until the viewing system is repaired.
- C. Equipment.** A registrant shall ensure that:
1. There is a means to terminate x-ray exposure automatically in the event of equipment failure by:
 - a. De-energizing the x-ray source, or
 - b. Shuttering the x-ray beam.
 2. The equipment shall provide the operator the ability to terminate the x-ray exposure at any time during the examination, provided the scan or series of scans is greater than one-half second duration.
 - a. If an operator terminates an x-ray exposure, the operator shall reset the CT conditions of operation before the initiation of another scan.
 - b. A visible signal shall indicate when an x-ray exposure has been terminated because of equipment failure.
 3. A means is provided to permit visual determination of the tomographic plane for a single tomogram system, or the location of a reference plane offset from a single tomogram or multiple tomogram system.
 - a. If a light source is used to satisfy this requirement, it shall provide illumination of the tomographic plane or reference plane under ambient light conditions.
 - b. The difference between the actual plane location and the indicated location of a tomographic plane or reference plane shall not exceed 5 millimeters.
 - c. The deviation of indicated scan increment versus actual increment shall not exceed plus or minus 1 millimeter with any mass from 0 to 100 kilograms resting on the patient support device.

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4. The control panel and gantry provides a visual indication, if x-rays are produced.
 5. Emergency buttons and switches are marked by function.
 6. Parameters of CT operation used during a patient examination are visible to the operator upon initiation of the scan. If an operational parameter is not adjustable by the operator, this subsection may be met by indicating on the control panel the parameter is not adjustable by the operator.
 7. Radiation exposure does not exceed 100 mR in one hour at one meter in any direction from the tube port of an operating CT.
 8. The angular position or positions where the maximum surface CTDI occurs is identified to allow for reproducible positioning of a CT dosimetry phantom, except in those cases where the x-ray tubes are designed to move, in which case, the maximum dose and associated tube position shall be evaluated according to manufacturer recommendations.
- D. Operating Procedures.** A registrant shall ensure that:
1. Operating procedures are available at the control panel, or by electronic means, regarding the operation of a CT and evaluation of a CT's operation.
 2. The operating procedures contain the following information:
 - a. A copy of the latest evaluation of the CT's operation, to include output for each CT procedure, performed by a qualified expert;
 - b. Instructions on the use of the CT performance phantom by the qualified expert, a schedule of quality control tests with the results of the most recent quality control test, and the allowable variations for the indicated parameters;
 - c. The distance in millimeters between the tomographic plane and the reference plane if a reference plane is used; and
 - d. A current technique chart that contains the information required in R12-1-607(D)(4)(a) for both adult and pediatric patients, as applicable, is available at the CT operating console, and a procedure for determining whether a CT has been performed according to instructions of a physician.
 - e. A written or electronic log that contains the information required in R12-1-607(D)(5) as well as an entry in the record of any displayed values for the exam from either a CTDI vol or DLP measurement for each patient exam completed on equipment manufactured on or after January 1, 2011.
 3. If the evaluation of the CT's operation or quality control test identifies a parameter exceeding the tolerance established by a qualified expert, the use of a CT for patient examination is limited to those uses established in written instructions from the qualified expert.
- E. Quality control tests.** A registrant shall have a written quality control test procedure, developed by a qualified expert, and ensure that the quality control test procedure:
1. Incorporates the use of a CT performance phantom that is compatible with an approved accreditation program approved by the Medicare Improvements for Patients and Providers Act (MIPPA) or supplied by or approved for use by the manufacturer of the unit.
 2. Is followed in the evaluation of the CT's operation, that the interval between tests does not exceed those set forth in the application for accreditation or quarterly if not accredited by an organization approved by (MIPPA), and that system conditions are specified by the registrant's qualified expert.
- F. Evaluation of a CT's operation.** A registrant shall ensure that:
1. The evaluation of a CT's operation is performed by, or under the direct supervision of, a qualified expert who is physically present at the facility during the evaluation of the CT's operation.
 2. The evaluation of a CT's operation:
 - a. Is performed before initial patient use and annually (within two months of the annual due date) and after any change or replacement of components that could, in the opinion of the qualified expert, cause a change in radiation output; and
 - b. Shall measure the CTDI in a dosimetry phantom along the two axes specified in subsection (F)(4)(b).
 - c. A complete evaluation of a CT unit, performed before the annual due date shall clearly list if the new survey changes the annual due date for the unit. It shall be clearly noted on all documentation for the next three years that the survey has established a new annual due date based upon the date of the new survey.
 3. The evaluation of a CT's x-ray system is performed with a calibrated dosimetry system that:
 - a. Has been calibrated using a method that is traceable to the National Institute of Standards and Technology (NIST), and
 - b. Has been calibrated within the preceding two years.
 4. CT dosimetry phantoms used in determining radiation output are compatible with an approved accreditation program approved by (MIPPA) or supplied by or approved for use by the manufacturer of the unit; and
 - a. Are constructed in a way that the parameters used to image the most commonly imaged parts of the human body are evaluated; and
 - b. At a minimum, provide means for placement of a dosimeter along the axis of rotation and along a line parallel to the axis of rotation 1.0 centimeter from the outer surface and within the phantom.
 5. Any effects on the measured dose due to the removal of phantom material to accommodate the dosimeter are accounted for in the reported data or included in the statement of maximum deviation for the measured values.
- G. CT units designated for simulator use, veterinary use, dental use, podiatry use, and non-diagnostic use on humans** are exempt from the annual requirements in subsections (E) and (F) provided an initial evaluation is conducted by a qualified expert and the output does not exceed the manufacturers specified limits. The initial evaluation shall be maintained for Agency review.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former

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Section R12-1-612 repealed, new Section R12-1-612 adopted effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R.1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-613. Veterinary Medicine Radiographic Systems**A. Equipment.** A registrant shall ensure that:

1. Before January 2, 1996, the total filtration permanently in the useful beam is not less than 1.5 millimeters aluminum-equivalent for equipment operating at up to 70 kVp and 2.0 millimeters aluminum-equivalent for equipment operating in excess of 70 kVp;
2. A device is provided to terminate the exposure after a preset time or exposure;
3. Each radiographic system has a "dead-man" exposure switch with an electrical cord of sufficient length to allow the operator to stand at least 1.82 meters (six feet) away from the useful beam during x-ray exposures.

B. Procedures: A registrant shall ensure that:

1. Unless required to restrain an animal, the operator stands at least 1.82 meters (6 feet) away from the useful beam and the animal during a radiographic exposure;
2. An individual other than the operator is not in the x-ray room or area while an exposure is being made, unless the individual's assistance is required;
3. If possible, an animal is held in position during an x-ray exposure using mechanical supporting or restraining devices;
4. An individual holding an animal during an x-ray exposure is:
 - a. Wearing protective gloves and an apron of not less than 0.5 millimeter lead equivalent or positioned behind a whole-body protective barrier;
 - b. Wearing required personnel monitoring devices; and
 - c. Positioned so that no part of the person's body, except hands and arms, will be struck by the useful beam;
5. If an individual holds or supports an animal or a film during an x-ray exposure, the name of the individual is recorded in an x-ray log that contains the animal's name, the type of x-ray procedure, the number of exposures, and the date of the procedure; and
6. As a condition of employment an individual is not required to routinely hold or support animals, or hold film during radiation exposures.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsection (B) effective August 8, 1986 (Supp. 86-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-614. Mammography Systems**A. Equipment.** A registrant shall ensure that:

1. Only radiation machines specifically designed for mammographic examinations are used;
2. The film processor used in the registrant's facility is maintained in accordance with the film processor's and film manufacturer's recommendations;

3. Each facility has an image development system onsite unless the Agency has approved an alternate system;
4. If used with screen-film image receptors, and the contribution to filtration made by the compression device is included, the useful beam has a half-value layer between the values of: "measured kVp/100 and measured kVp/100 + L millimeters" of aluminum equivalent, where L = 0.12 for Mo/Mo, L= 0.19 for Mo/Rh, L=0.22 for Rh/Rh, L=0.30 for W/Rh target filtration combinations and L= 0.33 for other target filtration combinations not otherwise specified.
5. The combination of focal spot size, source-to-image distance and magnification produces a radiograph with a resolution of at least 12 line pairs per millimeter at an object-to-image receptor distance of 4.5 centimeters; or the standards in Table 3-3 of the American Association of Physicists in Medicine (AAPM), Report No. 29, Equipment Requirements and Quality Control for Mammography, August 1990, published by the American Institute of Physics, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747 (This report is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. The report is available online at: <http://www.aapm.org/pubs/reports>; print copies may be purchased from Medical Physics Publishing, 4513 Vernon Blvd., Madison, WI 53705; toll free at (800) 442-5778.);
6. The compression device used with the mammographic unit, unless specifically manufactured otherwise, is parallel to the imaging plane, not varying at any spot by more than 1 centimeter;
7. The mammographic x-ray system with initial power drive:
 - a. Has compression paddles compatible with each size of image receptor;
 - b. Is capable of compressing the breast with a force of at least 25 pounds, but not more than 45 pounds, and maintaining the compression for at least three seconds; and
 - c. Is used in a manner so that the chest wall edge of the compression device is aligned just beyond the chest wall edge of the image receptor so that the chest wall edge of the compression device does not appear on the image receptor;
8. A mammographic x-ray system using screen-film image receptors has:
 - a. At least two different sizes of moving anti-scatter grids, including one for each size of image receptor utilized; and
 - b. Automatic exposure control;
9. All mammographic x-ray systems indicate or provide a means of determining, the mAs resulting from each exposure made with automatic exposure control;
10. The collimation provided limits the useful beam to the image receptor so that the beam does not extend beyond any edge of the image receptor at any designated source to image receptor distance by more than 2 percent of the source to image receptor distance;
11. The accuracy of the indicated kVp is within plus or minus 2kVp;
12. Mammographic x-ray systems operating with automatic exposure control are capable of maintaining a film density within plus or minus 0.15 optical density units over the clinical range of kVp used, for a breast having an equivalent phantom thickness from 2 to 6 centimeters. If a technique chart is used, the operator shall maintain the

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- film density within plus or minus 0.15 optical density units of the mean optical density.
13. At a kVp of 28, the mammographic x-ray system is capable of generating at least 2.0 $\mu\text{C/kg/mAs}$ (8mR/mAs) and at least 200 $\mu\text{C/kg/second}$ (800 mR/second), measured at a point 4.5 centimeters above the surface of the patient support device when the Source-image receptor distance is at its maximum;
 14. Screens are not used for mammography if one or more areas of greater than 1 centimeter squared of poor screen-film contact are seen when tested, using a 40 mesh screen test;
 15. Mammographic image quality meets the minimum mammography film standards for phantom performance in Mammography Quality Control Manual, 1999 edition, published by the American College of Radiology (ACR). (This manual is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. The manual is available from ACR Publication Sales, P.O. Box 533, Annapolis Junction, MD 20701; toll free at (800) 227-7762; e-mail at: acr@brightkey.net).
 16. The mean glandular dose for one cranio-caudal view of a 4.2 centimeter (1.8 inch) compressed breast, composed of 50 percent adipose and 50 percent glandular tissue, does not exceed 300 millirads (3 milligray); and
 17. A radiologic physicist who meets the requirements in R12-1-615(A)(1)(c) evaluates the operation of a mammographic x-ray system:
 - a. When first installed and annually thereafter,
 - b. Following any major change in equipment or replacement of parts, and
 - c. When quality assurance tests indicate calibration is necessary.
- B. Operating Procedures.** A registrant shall ensure that:
1. Each mammographic facility has a quality assurance program, and that the quality assurance program includes performance and documentation of the quality control tests in subsection (B)(2), conducted at the required time intervals. Test results shall fall within the specified limits in subsection (B)(2) or the registrant shall take corrective action and maintain documentation that the results are within specified limits before performing or processing any further examinations using the system that failed. A radiologic physicist, as defined in R12-1-615(A)(1)(c), shall review the program and make any recommendations necessary for the facility to comply with this Section;
 2. The quality assurance program meets federal requirements (Contained in 21 CFR 900.12(d)(1), and (e)(1) through (e)(10), revised April 1, 2013, incorporated by reference and available under R12-1-101. This incorporated material contains no future editions or amendments.); or the following requirements:
 - a. Daily sensitometric and densitometric evaluation of the image processing system demonstrates that Base + Fog < +0.03 optical density of operating level, Mid Density \pm 0.15 optical density of operating level, and Density Difference \pm 0.15 optical density of operating level;
 - b. Weekly phantom image quality evaluations demonstrate the visualization of at least four fibers, three speck groups, and three masses with a background of greater than 1.40 optical density, not varying by 0.20 optical density of operating level;
 - c. Monthly technique chart evaluations demonstrate updates for all equipment changes and that all examinations are being performed according to a physicist's density control recommendation;
- d. Quarterly fixer retention evaluations demonstrate an acceptable limit of less than or equal to 5.0 micrograms per square centimeter;
 - e. Quarterly repeat analysis demonstrates an acceptable limit of less than 2 percent increase in repeats;
 - f. Semiannual darkroom fog evaluations meet the limit of less than or equal to 0.05 optical density of fog, using the two minute exposed film method;
 - g. Semiannual screen film contact evaluations meet the limit of less than one area of poor contact of 1 centimeter squared, using a 40 mesh screen on all clinically-used screens;
 - h. Semiannual automatic compression force evaluations meet the limit of greater than or equal to 25 pounds (111 Newtons) and less than 45 pounds (200 Newtons);
 - i. A survey shall be conducted annually and whenever indicated for installation, major repairs, parts replacement, or as deemed necessary by a qualified expert when quality control test results indicate a survey is necessary; the survey shall include all of the following tests:
 - i. Automatic exposure control performance and thickness response;
 - ii. Accuracy and reproducibility of kVp;
 - iii. System resolution;
 - iv. Breast entrance air kerma and automatic exposure control reproducibility;
 - v. Average glandular dose;
 - vi. X-ray field, light field, and image receptor alignment;
 - vii. Compression paddle alignment;
 - viii. Uniformity of screen speed;
 - ix. System artifacts;
 - x. Radiation output;
 - xi. Decompression;
 - xii. Beam quality and half value layer;
 - j. For systems with image receptor modalities other than screen film:
 - i. The quality assurance and quality control program for the acquisition system meets or exceeds the recommendations by the manufacturer; and
 - ii. The quality assurance and quality control program for the printer meets or exceeds the recommendations by the image receptor manufacturer. In the absence of recommendations by the image receptor manufacturer for the specified printer, the quality control and assurance program meets or exceeds the recommendations of the printer manufacturer; and
 - iii. The quality assurance and quality control program for the interpretation monitors meets or exceeds the recommendations by the image receptor manufacturer. In the absence of recommendations by the image receptor manufacturer for the specified monitor or monitors, the quality control and assurance program meets or exceeds the recommendations of the interpretation monitor or monitors manufacturer; and
 - k. The registrant maintains records documenting compliance with the provisions in this subsection for three years from the date each requirement is met.

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The records shall be made available for Agency inspection.

C. Mammographic films and reports.

1. A registrant shall maintain films and reports for a minimum of five years. In those cases where no subsequent mammographic procedures are performed, the registrant shall maintain films and associated reports for 10 years. If the mammographic facility is closed, the registrant shall make arrangements for storage of the films and associated reports for five years after the closure; and
2. A registrant shall make films and reports available for comparison upon request for temporary or permanent transfer to other mammographic facilities.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

R12-1-615. Mammography Personnel

A. Personnel.

1. Each registrant shall require personnel who perform mammography, which includes the production, processing, and interpretation of mammograms and related quality assurance activities, to meet the following requirements:
 - a. An interpreting physician shall meet federal requirements (Contained in 21 CFR 900.12(a)(1), revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 - i. Be licensed under A.R.S. Title 32, Chapters 13 or 17;
 - ii. Have initially completed 40 hours of medical education credits in mammography;
 - iii. Be certified by the American Board of Radiology or the American Osteopathic Board of Radiology or meet the requirements of the mammography quality standards act regulations for quality standards of interpreting physicians;
 - iv. Have interpreted or reviewed an average of 300 mammograms per year during the preceding two years or have completed a radiology residency that included mammogram image interpretation in the preceding two years;
 - v. Have completed 15 hours of continuing medical education credits in mammography during the preceding three years; and
 - vi. Have received at least eight hours of training specific to each mammographic modality before engaging in independent interpretation.
 - b. A mammographic technologist shall meet federal requirements (Contained in 21 CFR 900.12(a)(2), revised April 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 - i. Possess a valid mammographic technologist certificate issued by the Medical Radiologic Technology Board of Examiners, as required in

- ii. Have performed at least 200 mammographic examinations in the preceding two years;
- iii. Have completed 15 hours of continuing medical education credits in mammography during the preceding three years; and
- iv. Have received at least eight hours of training specific to each mammographic modality to be used by the technologist in performing mammographic examinations.

- c. A radiologic physicist shall meet federal requirements (Contained in 21 CFR 900.12(a)(3), revised April 1, 2013, incorporated by reference and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 - i. Be certified by the American Board of Radiology, American Board of Medical Physics, or the American Board of Health Physics;
 - ii. Possess documentation of state approval;
 - iii. Hold a master's degree or higher in a physical science;
 - iv. Have, upon initial employment as a radiologic physicist, experience conducting, at least one mammographic facility survey and evaluating at least 10 mammographic units;
 - v. Have, after completing the experience requirements in subsection (A)(1)(c)(iv), continuing experience surveying two mammographic facilities and evaluating six mammographic units during the preceding two years;
 - vi. Have completed 15 hours of continuing medical education credits in mammography during the three preceding years;
 - vii. Have received at least eight hours of training specific to any modality surveyed; and
2. Each registrant shall maintain records documenting the requirements in subsection (A)(1) for three years from the date the requirement is met and make the records available for Agency inspection.

- B. Radiologic physicists shall apply for and renew their certification on agency approved forms. In addition to Agency supplied forms, applicants must also submit documentation showing education, mammography specific training, education, and board certification. Upon renewal, an applicant must submit documentation showing current continuing education requirements are met.**

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.C. 4302, effective November 14, 2003 (Supp. 03-3). New Section R12-1-615 made by final rulemaking at 19 A.A.R. 3882, effective January 4, 2014 (Supp. 13-4).

Appendix A. Information Submitted to the Agency According to R12-1-604(A)(3)(c)

- A.** Name and address of the applicant and, if applicable, the name and address of any person within this state that is authorized to act on behalf of the applicant;
- B.** Disease or conditions to be diagnosed using the proposed x-ray examination;
- C.** A detailed description of each x-ray examination that will be used in the diagnosis;

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- D. A description of the population to be examined in the screening program, using characteristics such as age, sex, physical condition, and other descriptive information;
- E. An evaluation of any known alternative diagnostic modalities not involving ionizing radiation that could achieve the same diagnosis as a screening program and why these modalities have not been chosen;
- F. An evaluation by a qualified expert of the x-ray equipment used in the screening program, which demonstrates that the x-ray equipment satisfies the requirements of this Article.
- G. A description of the quality control program;
- H. A copy of the technique chart for the planned x-ray examination;
- I. The qualifications of each individual who will be operating the x-ray equipment;
- J. The qualifications of the individual who will be supervising each operator of the x-ray equipment;
- K. The name and address of the individual who will interpret each radiographic image;
- L. A description of the planned procedures for advising a screened individual and the screened individual's physician of the screening procedure results, and the need for further medical care, and
- M. A description of the procedures for retention or disposition of the radiographic images and other records pertaining to the x-ray examination.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

Appendix B. Repealed**Historical Note**

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

ARTICLE 7. MEDICAL USES OF RADIOACTIVE MATERIAL**R12-1-701. License Required**

- A. A person may manufacture, produce, acquire, receive, possess, prepare, use, or transfer radioactive material for medical use only in accordance with a specific license issued by the Agency, the NRC, or another Agreement State, or as allowed in subsection (B)(1) or (B)(2).
- B. A specific license is not needed for an individual who:
 1. Receives, possesses, uses, or transfers radioactive material in accordance with the rules in this Chapter under the supervision of an authorized user as provided in R12-1-706, unless prohibited by license condition; or
 2. Prepares unsealed radioactive material for medical use in accordance with the rules in this Chapter under the supervision of an authorized nuclear pharmacist or authorized user.

Historical Note

Former Rule Section G.1. Former Section R12-1-701 repealed, new Section R12-1-701 adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (07-1).

R12-1-702. Definitions

"Authorized medical physicist" means an individual who meets the requirements in R12-1-711. For purposes of ensuring that personnel

are adequately trained, an authorized medical physicist is a "qualified expert" as defined in Article 1.

"Authorized nuclear pharmacist" means a pharmacist who meets the requirements in R12-1-712.

"Authorized user" means a physician, dentist, or podiatrist who meets the requirements in R12-1-719, R12-1-721, R12-1-723, R12-1-727, R12-1-728, or R12-1-744.

"Brachytherapy" means a method of radiation therapy in which a sealed source or group of sealed sources is utilized to deliver beta or gamma radiation at a distance of up to a few centimeters, by surface, intracavitary, intraluminal, or interstitial application.

"CT" means computerized tomography.

"High dose rate afterloading brachytherapy" means the treating of human disease using the radiation from a radioactive sealed source containing more than 1 curie of radioactive material. The radioactive material is introduced into a patient's body using a device that allows the therapist to indirectly handle the radiation source during the treatment. For purposes of the requirements in this Article "pulse dose rate afterloading brachytherapy" is included in this definition.

"Human research subject" means an individual who is or becomes a participant in research overseen by an IRB, either as a recipient of the test article or as a control. A subject may be either a healthy human, in research overseen by the RDRC, or a patient.

"Institutional review board" (IRB) is defined in R12-1-704(B).

"Manual brachytherapy" means a type of brachytherapy in which the brachytherapy sources (e.g., seeds, ribbons) are manually placed topically on or inserted either into the body cavities that are in close proximity to a treatment site or directly into the tissue volume.

"Medical event" means an event that meets the criteria in R12-1-745.

"Medical institution" means an organization in which several medical disciplines are practiced.

"Medical use" means the intentional internal or external administration of radioactive material, or the radiation from it, to an individual under the supervision of an authorized user.

"Nuclear cardiology" means the diagnosis of cardiac disease using radiopharmaceuticals.

"PET" means positron emission tomography.

"Physically present" means that a supervising medical professional is in proximity to the patient during a radiation therapy procedure so that immediate emergency orders can be communicated to ancillary staff, should the occasion arise.

"Prescribed dosage" means the specified activity or range of activity of unsealed radioactive material as documented:

In a written directive; or

In accordance with the directions of the authorized user for procedures performed in accordance with the uses described in Exhibit A.

"Prescribed dose" means:

For gamma stereotactic radiosurgery, the total dose as documented in the written directive;

For teletherapy, the total dose and dose per fraction as documented in the written directive;

For manual brachytherapy, either the total source strength and exposure time or the total dose, as documented in the written directive; or

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For remote brachytherapy afterloaders, the total dose and dose per fraction as documented in the written directive.

“Radiation Safety Officer” (RSO) for purposes of this Article, and in addition to the definition in Article 1 means an individual who:

- Meets the requirements in R12-1-710, or
- Is identified as a radiation safety officer on:
 - A specific medical use license issued by the NRC or Agreement State; or
 - A medical use permit issued by a NRC master material license.

“Radioactive drug” is defined in 21 CFR 310.3(c) and includes a “radioactive biological product” as defined in 21 CFR 600.3, April 1, 2006, both of which are incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, DC 20408, and on file with the Agency. These incorporated materials contain no future editions or amendments.

“Radioactive Drug Research Committee” (RDRC) means the committee established by the licensee to review all basic research involving the administration of a radioactive drug to human research subjects, taken from 21 CFR 361.1, April 1, 2006, which is incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, DC 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments. Research is considered basic research if it is done for the purpose of advancing scientific knowledge, which includes basic information regarding the metabolism (including kinetics, distributions, dosimetry, and localization) of a radioactive drug or regarding human physiology, pathophysiology, or biochemistry. Basic research is not intended for immediate therapeutic or diagnostic purposes and is not intended to determine the safety and effectiveness of a radioactive drug in humans.

“Radiopharmaceutical” means any drug that exhibits spontaneous disintegration of unstable nuclei with the emission of nuclear particles or photons and includes any nonradioactive reagent kit or nuclide generator that is intended to be used in the preparation of any such substance. For purposes of this Article radiopharmaceutical is equivalent to radioactive drug.

“Remote afterloading brachytherapy device” means a device used in radiation therapy that allows the authorized user to insert, from a remote location, a radiation source into an applicator that has been previously inserted in an individual requiring treatment.

“Sealed Source and Device Registry” means the national registry that contains all the registration certificates, generated by both NRC and the Agreement States, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for the product.

“Stereotactic radiosurgery” means the use of external radiation in conjunction with a stereotactic guidance device to very precisely deliver a dose.

“Teletherapy” means therapeutic irradiation in which the sealed source of radiation is at a distance from the body.

“Therapeutic dosage” means a dosage of unsealed radioactive material that is intended to deliver a radiation dose to a patient or human research subject for palliative or curative treatment.

“Therapeutic dose” means a radiation dose delivered from a source containing radioactive material to a patient or human research subject for palliative or curative treatment.

“Treatment site” means the anatomical description of the tissue intended to receive a radiation dose, as described in a written directive.

“Unit dosage” means a dosage prepared for medical use for administration as a single dosage to a patient or human research subject without any further manipulation of the dosage after it is initially prepared.

“Written directive” means an authorized user’s written order for the administration of radioactive material or radiation from radioactive material to a specific patient or human research subject, as specified in R12-1-707.

Historical Note

Former Rule Section G.2; Former Section R12-1-702 repealed, new Section R12-1-702 adopted effective June 30, 1977 (Supp. 77-3). Former Section R121-702 renumbered and amended as Section R12-1-703, new Section R12-1-702 adopted effective December 20, 1985 (Supp. 85-6). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-703. License for Medical Use of Radioactive Material

- A.** In addition to the requirements set forth in R12-1-309, the Agency shall issue a specific license for medical use of radioactive material if:
1. The applicant has appointed a radiation safety committee, meeting the requirements in R12-1-705, that will oversee the use of licensed material throughout the licensee’s facility and associated radiation safety program;
 2. The applicant possesses facilities for the clinical care of patients or human research subjects; and
 3. The individual designated on the application as an authorized user has met the training and experience requirements in R12-1-719, R12-1-721, R12-1-723, R12-1-727, R12-1-728, or R12-1-744.
- B.** Specific licenses to individual authorized users for medical use of radioactive material:
1. The Agency shall approve an application by a prospective individual authorized user or prospective group of authorized users for a specific license governing the medical use of radioactive material if:
 - a. The applicant satisfies the general requirements in R12-1-309;
 - b. The application is for use in the applicant’s practice at an office outside of a medical institution;
 - c. The applicant meets the training and experience requirements in subsection (A)(3); and
 - d. The applicant has a radiation safety committee, if the criteria in R12-1-705 are applicable and a RDRC, if the use is basic research involving humans.
 2. The Agency shall not approve an application by a prospective authorized user or group of prospective authorized users for a specific license to receive, possess, or use radioactive material on the premises of a medical institution unless:
 - a. The use of radioactive material is limited to:
 - i. The administration of radiopharmaceuticals for diagnostic or therapeutic purposes;
 - ii. The performance of diagnostic studies on patients or human research subjects to whom a radiopharmaceutical has been administered;

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- iii. The performance of in vitro diagnostic studies; or
 - iv. The calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation, or diagnostic instrumentation;
 - b. The authorized user brings the radioactive material and removes the radioactive material upon departure; and
 - c. The medical institution does not hold a radioactive materials license under subsection (A).
- C.** Specific licenses for certain groups of medical uses of radioactive material:
1. The Agency shall approve an application for a specific license under subsections (A) or (B), for any medical use or uses of radioactive material specified in Groups 100 through 1,000, in Exhibit A of this Article, for all of the materials within each group requested in the application if:
 - a. The applicant satisfies the requirements of subsections (A) and (B);
 - b. Each person involved in the preparation and use of the radioactive material is an authorized user, an authorized nuclear pharmacist, or certified as a nuclear medicine technologist by the Medical Radiologic Technology Board of Examiners (MRTBE);
 - c. The applicant's radiation detection and measuring instrumentation is adequate for conducting the procedures involved in the authorized uses selected from Group 100 through Group 1,000; and
 - d. The applicant's radiation safety operating procedures are adequate for handling and disposal of the radioactive material involved in the authorized uses selected from Group 100 through Group 1,000.
 2. Any licensee who is authorized to use radioactive material:
 - a. In unsealed form under Groups 100, 200, 300 or 1,000 listed in Exhibit A of this Article, shall do so using radiopharmaceuticals prepared in accordance with R12-1-311(I); or
 - b. In sealed source form under Groups 400, 500, 600, or 1,000 listed in Exhibit A of this Article, shall do so using sealed sources that have been manufactured and distributed in accordance with R12-1-311(K);
 - c. In any form under group 1,000 listed in Exhibit A of this Article, shall do so using sealed and unsealed sources that have been manufactured and distributed in accordance with the specific license issued by the Agency.
 3. Any licensee who is licensed according to subsection (C)(1), for one or more of the medical use groups in Exhibit A also is authorized to use radioactive material under the general license in R12-1-306(E) for the specified in vitro uses without filing Form ARRA-9 as required by R12-1-306(E)(2); provided, that the licensee is subject to the other provisions of R12-1-306(E).
- D.** In addition to the other license application requirements in this Section, each applicant shall include in the radiation safety program required under subsection (A)(1) a system for ensuring that each syringe and vial that contains unsealed radioactive material is labeled in accordance with R12-1-431(D).

Historical Note

Former Rule Section G.3; Former Section R12-1-703 repealed, new Section R12-1-703 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-703

renumbered and amended as Section R12-1-704, former Section R12-1-702 renumbered and amended as Section R12-1-703 effective December 20, 1985 (Supp. 85-6).

Section repealed and new Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-704. Provisions for the Protection of Human Research Subjects

- A.** A licensee may conduct basic research involving human research subjects and research involving patients receiving investigational new drugs or devices if the licensee only uses the radioactive material specified on the license for the uses authorized on the license.
- B.** If research is conducted, funded, supported, or regulated by a federal agency that has implemented the federal Policy for Protection of Human Research Subjects (45 CFR 46, June 23, 2005, which is incorporated by reference, published by the Office of Federal Register, National Archives and Records Administration, Washington, DC 20408, on file with the Agency, and contains no future editions or amendments), the licensee shall:
1. Obtain review and approval of the research from an Institutional Review Board (IRB); and
 2. Obtain informed consent from the human research subject.
- C.** If research will not be conducted, funded, supported, or regulated by a federal agency that has implemented the federal policy in subsection (B), a medical licensee shall, before conducting research, apply for and receive a specific amendment to its use license. The amendment request shall include a written commitment that the licensee will, before conducting research:
1. Obtain review and approval of the research from an IRB, as defined and described in the federal policy; and
 2. Obtain informed consent from the human research subject.
- D.** Before conducting the research described in subsection (A) the licensee shall apply to the Agency for and receive a specific amendment to its medical use license. The amendment request shall include a written commitment that the licensee will, before conducting research:
1. Obtain any review and approval required by this Section, and
 2. Obtain informed consent from the human research subject if applicable.
- E.** Nothing in this Section relieves a licensee from complying with the other requirements in this Article.

Historical Note

Repealed effective June 30, 1977 (Supp. 77-3). Former Section R12-1-703 renumbered and amended as Section R12-1-704 effective December 20, 1985 (Supp. 85-6).

Section repealed and new Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made

by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-705. Authority and Responsibilities for the Radiation Protection Program

- A. A licensee's management shall appoint in writing a radiation safety officer, who agrees, in writing, to be responsible for implementing the radiation protection program. The licensee, through the RSO, shall ensure that radiation safety activities are being performed in accordance with licensee-approved procedures and regulatory requirements. Each time the RSO is changed, the licensee shall provide to the Agency within 30 days an amendment request and a copy of the correspondence between the licensee's management and the candidate, accepting the position of RSO.
- B. Licensees that are authorized for two or more different types of uses of radioactive material listed in Groups 300, 400, 600, and 1,000, or two or more types of units under group 600 or 1,000, shall establish a Radiation Safety Committee (RSC) to oversee all uses of radioactive material permitted by the license. At a minimum, the RSC shall include an authorized user of each type of use permitted by the license, the RSO, a representative of the nursing service, and a representative of management who is neither an authorized user nor a RSO.
- C. If a licensee or applicant is not a health care institution and is unable to meet the RSC membership requirements in subsection (B), the licensee or applicant may request an exemption in accordance with A.R.S. § 30-654(B)(13). The request for exemption shall be made to the Agency in writing and list the reasons why the health care institution is unable to meet the requirements.
- D. A licensee shall ensure that the RSC meets, at a minimum, on an annual basis and maintain the RSC meeting minutes for Agency review for three years after the date of the RSC meeting.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-706. Supervision

- A. For purposes of this rule, "supervision" means the exercise of control over or direction of the use of radioactive material in the practice of medicine by an authorized user named on a radioactive material license. Supervision does not require a supervising physician's constant physical presence if the supervising physician can be easily contacted by radio, telephone, or telecommunication.
- B. A physician may use radioactive material if the person is licensed by the Arizona Medical Board or Board of Osteopathic Examiners in Medicine and Surgery and is listed as an authorized user on the Arizona radioactive material license under which the radioactive material is obtained.
- C. A licensee that permits the receipt, possession, use, or transfer of radioactive material by an individual under the supervision of an authorized user, shall:
1. Instruct the supervised individual in the licensee's written radiation protection procedures, written directive procedures, rules, and license conditions with respect to the use of radioactive material; and
 2. Require the supervised individual to follow the instructions of the supervising authorized user for medical uses of radioactive material, written radiation protection procedures established by the licensee, written directive pro-

cedures, rules, and license conditions with respect to the medical use of radioactive material.

- D. A licensee that permits the preparation of radioactive material for medical use by an individual who is supervised by an authorized nuclear pharmacist or a physician, who is an authorized user, shall:
1. Instruct the supervised individual in the preparation of radioactive material for medical use, as appropriate to that individual's involvement with radioactive material; and
 2. Require the supervised individual to follow the instructions of the supervising authorized user or authorized nuclear pharmacist regarding the preparation of radioactive material for medical use, written radiation protection procedures established by the licensee, the rules, and license conditions.
- E. A licensee that permits supervised activities under subsections (C) and (D) is responsible for the acts and omissions of the supervised individual.
- F. A limited-service nuclear pharmacy licensee shall dispense radiopharmaceuticals only to a physician listed as an authorized user on a valid radioactive material license issued by the Agency, an Agreement State, or the NRC. For purposes of this rule "limited-service nuclear pharmacy" is defined in R4-23-110.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-707. Written Directives

- A. A licensee shall ensure that a written directive is dated and signed by an authorized user before the administration of I-131 sodium iodide greater than 1.11 MBq (30 microcuries (μCi)), any therapeutic dosage of unsealed radioactive material or any therapeutic dose of radiation from radioactive material. If, because of the emergent nature of the patient's condition, a delay in order to provide a written directive would jeopardize the patient's health, an oral directive is acceptable. The information contained in the oral directive shall be documented as soon as possible in writing in the patient's record. A written directive shall be prepared within 48 hours of the oral directive.
- B. A written directive shall contain the patient or human research subject's name and the following information:
1. For any administration of quantities greater than 1.11 MBq (30 μCi) of sodium iodide I-131: the dosage;
 2. For an administration of a therapeutic dosage of unsealed radioactive material other than sodium iodide I-131: the radiopharmaceutical, dosage, and route of administration;
 3. For gamma stereotactic radiosurgery: the total dose, treatment site, and values for the target coordinate settings per treatment for each anatomically distinct treatment site;
 4. For teletherapy: the total dose, dose per fraction, number of fractions, and treatment site;
 5. For high dose-rate remote afterloading brachytherapy: the radionuclide, treatment site, dose per fraction, number of fractions, and total dose; or
 6. For all other brachytherapy, including low, medium, and pulsed dose rate remote afterloaders:
 - a. Before implantation: treatment site, the radionuclide, and dose; and

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- b. After implantation but before completion of the procedure: the radionuclide, treatment site, number of sources, and total source strength and exposure time (or the total dose).
- C. The licensee shall retain a copy of the written directive for three years after creation of the record.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-708. Procedures for Administrations Requiring a Written Directive

For any administration requiring a written directive, the licensee shall develop, implement, and maintain written procedures to provide high confidence that:

1. The patient's or human research subject's identity is verified before each administration; and
2. Each administration is in accordance with the written directive.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-709. Sealed Sources or Devices for Medical Use

A licensee may only use:

1. Sealed sources, including teletherapy sources, or devices manufactured, labeled, packaged, and distributed in accordance with a license issued under Article 3 of this Chapter, equivalent regulations of the NRC or equivalent requirements of an Agreement State; or
2. Sealed sources or devices noncommercially transferred from another medical licensee; or
3. Teletherapy sources manufactured and distributed in accordance with a license issued by the Agency, the NRC, or another Agreement State.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-710. Radiation Safety Officer Training

A. A licensee shall require an individual fulfilling the responsibilities of the radiation safety officer, described in R12-1-705, to be an individual who:

1. Is certified by a specialty board whose certification process includes all of the requirements in subsection (A)(2) and whose certification has been recognized by the Agency, NRC, or an Agreement State. To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Meet the following minimum requirements:
 - i. Hold a bachelor's or graduate degree from an accredited college or university in physical science or engineering or biological science with a minimum of 20 college credits in physical science;
 - ii. Have five or more years of professional experience in health physics (graduate training may be substituted for no more than two years of the

- required experience) including at least three years in applied health physics; and
- iii. Pass an examination administered by diplomates of the specialty board, which evaluates knowledge and competence in radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology, and radiation dosimetry; or
- b. Meet the following minimum requirements:
 - i. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
 - ii. Have two years of full-time practical training and/or supervised experience in medical physics;
 - (1) Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the Commission or an Agreement State; or
 - (2) In clinical nuclear medicine facilities providing diagnostic and/or therapeutic services under the direction of physicians who meet the requirements for authorized users qualified under section R12-1-710(B), R12-1-721, or R12-1-723;
 - iii. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical diagnostic radiological or nuclear medicine physics and in radiation safety; or
2. Has completed a structured educational program consisting of both:
 - a. 200 hours of didactic and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Radiation biology; and
 - v. Radiation dosimetry; and
 - b. One year of full-time radiation safety experience under the supervision of the individual identified as the radiation safety officer on an Agency, NRC, or an Agreement State license or permit issued by a NRC master material licensee that authorizes similar type(s) of use(s) of radioactive material involving the following:
 - i. Shipping, receiving, and performing related radiation surveys;
 - ii. Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides;
 - iii. Securing and controlling radioactive material;
 - iv. Using administrative controls to avoid mistakes in the administration of radioactive material;
 - v. Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures;
 - vi. Using emergency procedures to control radioactive material; and
 - vii. Disposing of radioactive material; or
 - c. Has obtained written certification, signed by a precursor radiation safety officer, that the individual has

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satisfactorily completed the requirements in subsection (A)(2)(a) and (A)(2)(b) and has achieved a level of radiation safety knowledge sufficient to function independently as a radiation safety officer for a medical use licensee; or

3. Is an authorized user, authorized medical physicist, or authorized nuclear pharmacist identified on the licensee's license and has experience with the radiation safety aspects of similar types of use of radioactive material for which the individual has radiation safety officer responsibilities.

B. Exceptions.

1. An individual identified as a radiation safety officer on an Agency, a NRC, or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsections (A)(1) through (A)(3).
2. A physician, dentist, or podiatrist identified as an authorized user for the medical use of radioactive material on a license issued by the Agency, NRC, or Agreement State, a permit issued by a NRC master material licensee, a permit issued by an Agency, NRC, or Agreement State broad scope licensee, or a permit issued by a NRC master material license broad scope permittee before the effective date of these rules need not comply with the training requirements in this Article.

- C. The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

- D. Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R.

1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-711. Authorized Medical Physicist Training

- A. A licensee shall require an authorized medical physicist to be an individual who:

1. Is certified by a specialty board whose certification process includes all of the training and experience requirements in subsection (A)(3)(b) and (A)(3)(c) and whose certification has been recognized by the Agency, NRC or an Agreement State; or
2. Training requirements.
 - a. Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
 - b. Have two years of full-time practical training and/or supervised experience in medical physics:
 - i. Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the NRC or an Agreement State; or

cialty board recognized by the NRC or an Agreement State; or

- ii. In clinical radiation facilities providing high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services under the direction of physicians who meet the requirements for authorized users in R12-1-710, R12-1-719, R12-1-721, R12-1-723, R12-1-727, R12-1-728, or R12-1-744; and

- c. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical radiation therapy, radiation safety, calibration, quality assurance, and treatment planning for external beam therapy, brachytherapy, and stereotactic radiosurgery; or

3. Training requirements alternative.

- a. Holds a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university; and has completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of an individual who meets the requirements for an authorized medical physicist for the type(s) of use for which the individual is seeking authorization. This training and work experience must be conducted in clinical radiation facilities that provide high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services and must include:
 - i. Performing sealed source leak tests and inventories;
 - ii. Performing decay corrections;
 - iii. Performing full calibration and periodic spot checks of external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and
 - iv. Conducting radiation surveys around external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and

- b. Has obtained written attestation that the individual has satisfactorily completed the requirements in subsection (A)(3)(c) and (A)(2)(a) and (A)(2)(b) and (A)(3)(c), or (A)(3)(a) and (A)(3)(c); and has achieved a level of competency sufficient to function independently as an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status. The written attestation must be signed by a preceptor authorized medical physicist who meets the requirements in section, or equivalent Agreement State requirements for an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status; and

- c. Has training for the type(s) of use for which authorization is sought that includes hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system. This training requirement may be satisfied by satisfactorily completing either a training program provided by the vendor or by training supervised by an authorized medical physicist authorized for the type(s) of

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use for which the individual is seeking authorization.

- B. Exceptions. An individual identified as a teletherapy or medical physicist on an Agency, a NRC, or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsection (A).
- C. The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- D. Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-712. Authorized Nuclear Pharmacist Training

- A. A licensee shall require the authorized nuclear pharmacist to be a pharmacist who:
 - 1. Is certified as a nuclear pharmacist by a specialty board whose certification process has been recognized by the Agency, NRC, or an Agreement State. To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Have graduated from a pharmacy program accredited by the American Council on Pharmaceutical Education (ACPE) or have passed the Foreign Pharmacy Graduate Examination Committee (FPGEC) examination;
 - b. Hold a current, active license to practice pharmacy in Arizona;
 - c. Provide evidence of having acquired at least 4000 hours of training/experience in nuclear pharmacy practice. Academic training may be substituted for no more than 2000 hours of the required training and experience; and
 - d. Pass an examination in nuclear pharmacy administered by diplomates of the specialty board, that assesses knowledge and competency in procurement, compounding, quality assurance, dispensing, distribution, health and safety, radiation safety, provision of information and consultation, monitoring patient outcomes, research and development; or
 - 2. Has completed 700 hours in a structured educational program consisting of both:
 - a. 200 hours of classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and

- b. Supervised practical experience in a nuclear pharmacy involving:
 - i. Shipping, receiving, and performing related radiation surveys;
 - ii. Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides;
 - iii. Calculating, assaying, and safely preparing dosages for patients or human research subjects;
 - iv. Using administrative controls to avoid medical events in the administration of radioactive material; and
 - v. Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures; and
- 3. Has obtained written attestation, signed by a preceptor authorized nuclear pharmacist, that the individual has satisfactorily completed the requirements in subsection (A)(2) and has achieved a level of competency sufficient to function independently as an authorized nuclear pharmacist.

- B. Exceptions. An individual identified as a nuclear pharmacist on an Agency, a NRC or an Agreement State license or a permit issued by the NRC or an Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of these rules need not comply with the training requirements in subsections (A)(1) through (A)(3).
- C. The training and experience required in this Section shall be obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- D. Individuals who, under subsection (B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-713. Determination of Prescribed Dosages, and Possession, Use, and Calibration of Instruments

- A. A licensee shall determine and record the activity of each dosage before medical use.
- B. For a unit dosage, this determination shall be made by:
 - 1. Direct measurement of radioactivity; or
 - 2. Decay correction, based on the activity or activity concentration determined by:
 - a. A manufacturer or preparer licensed under R12-1-311 or equivalent NRC or Agreement State requirements; or
 - b. An Agency, NRC, or Agreement State licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an

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- Investigational New Drug (IND) protocol accepted by FDA or;
- c. A PET radioactive drug producer licensed under R12-1-311 or equivalent NRC or Agreement State requirements.
- C. For other than unit dosages, this determination shall be made by:
1. Direct measurement of radioactivity;
 2. Combination of measurement of radioactivity and mathematical calculations; or
 3. Combination of volumetric measurements and mathematical calculations based on the measurement made by a manufacturer or preparer licensed under R12-1-311, or equivalent NRC or Agreement State requirements.
- D. Unless otherwise directed by the authorized user, a licensee may not use a dosage if the dosage does not fall within the prescribed dosage range or if the dosage differs from the prescribed dosage by more than 20 percent.
- E. A licensee shall retain a record of the dosage determination required by this Section for Agency inspection for three years.
- F. For direct measurements performed in accordance with subsection (B)(1), a licensee shall possess and use instrumentation to measure the activity of the dosage before it is administered to each patient or human research subject.
- G. A licensee shall calibrate the instrumentation required in subsection (F) in accordance with nationally recognized standards, the manufacturer's instructions, or the following procedures.
1. The procedures that may be followed are:
 - a. Check each dose calibrator for constancy with a dedicated check source at the beginning of each day of use;
 - b. Test each dose calibrator for accuracy upon installation and at least annually thereafter by assaying at least two sealed sources containing different radionuclides whose activity the manufacturer has determined within 5 percent of its stated activity, whose activity is at least 10 microcuries for radium-226 and 50 microcuries for any other photon-emitting radionuclide, and at least one of which has a principal photon energy between 100 keV and 500 keV;
 - c. Test each dose calibrator for linearity upon installation and at least quarterly thereafter over a range from the highest dosage that will be administered to a patient or human research subject to 1.1 megabecquerels (30 microcuries);
 - d. Test each dose calibrator for geometry dependence upon installation over the range of volumes and volume configurations for which it will be used. The licensee shall keep a record of this test for the duration of the use of the dose calibrator.
 - e. Perform appropriate checks and tests required by this Section following adjustment or repair of the dose calibrator; and
 - f. Mathematically correct dosage readings for any geometry or linearity error that exceeds 10 percent if the dosage is greater than 10 microcuries and shall repair or replace the dose calibrator if the accuracy or constancy error exceeds 10 percent.
 2. A licensee shall maintain the dose calibrator in accordance with this subsection, even though the dose calibrator is only used to "verify" a dosage prepared by a supplier authorized in subsection (B)(2).
 3. A licensee shall maintain on file for Agency review nationally recognized standards or manufacturer's instructions used to maintain a dose calibrator and meet the requirements of subsection (G).
- H. A licensee shall calibrate the survey instruments before first use, annually, and following a repair that affects the calibration. A licensee shall:
1. Calibrate all scales with readings up to 10 mSv (1000 mrem) per hour with a radiation source;
 2. Calibrate two separated readings on each scale or decade that will be used to show compliance; and
 3. Conspicuously note on the instrument the date of calibration.
- I. A licensee may not use survey instruments if the difference between the indicated exposure rate and the calculated exposure rate is more than 20 percent.
- J. A licensee shall retain records of instrument calibration for three years following the calibration.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-714. Authorization for Calibration, Transmission, and Reference Sources

Any person authorized by R12-1-703 for medical use of radioactive material may receive, possess, and use any of the following radioactive material for check, calibration, transmission, and reference use.

1. Sealed sources, not exceeding 1.11 GBq (30 mCi) each, manufactured and distributed by a person licensed under Article 3 of this Chapter or equivalent NRC or Agreement State regulations.
2. Sealed sources, not exceeding 1.11 GBq (30 mCi) each, redistributed by a licensee authorized to redistribute the sealed sources manufactured and distributed by a person licensed under Article 3 of this Chapter, providing the redistributed sealed sources are in the original packaging and shielding and are accompanied by the manufacturer's approved instructions.
3. Any radioactive material with a half-life not longer than 120 days in individual amounts not to exceed 0.56 GBq (15 mCi).
4. Any radioactive material with a half-life longer than 120 days in individual amounts not to exceed the smaller of 7.4 MBq (200 µCi) or 1000 times the quantities in Article 4, Appendix B of this Chapter.
5. Technetium-99m in amounts as needed.
6. A licensee is limited to five sources of radiation authorized under subsections (1) through (3), unless otherwise specified in the licensee's radioactive material license.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-715. Requirements for Possession of Sealed Sources and Brachytherapy Sources

- A. A licensee in possession of any sealed source or brachytherapy source shall follow the radiation safety and handling instructions supplied by the manufacturer.
- B. A licensee in possession of a sealed source shall test the source for leakage in accordance with R12-1-417.
- C. A licensee in possession of sealed sources or brachytherapy sources, except for gamma stereotactic radiosurgery sources, shall conduct a physical inventory every six months of all sources in its possession. During the period of time between the inventories, the licensee shall add each acquired sealed source to the inventory record and remove from the inventory record each source that leaves the licensee's control.
- D. A licensee shall document the inventories conducted under subsection (C) and maintain inventory records in accordance with R12-1-450.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-716. Surveys of Ambient Radiation Exposure Rate, Surveys for Contamination, and PET Radiation Exposure Concerns

- A. In addition to the surveys required in Article 4 of this Chapter, a licensee shall survey with a radiation detection survey instrument at the end of each day of use all areas where unsealed radioactive material, requiring a written directive, is prepared for use or administered. In areas of routine use, that are to be released for unrestricted use, a licensee shall perform a survey of the area using an instrument appropriate for detecting contamination before releasing the area for unrestricted use.
- B. A licensee shall obtain the services of a person, experienced in the principles of radiation protection and installation design, to design a PET facility and perform a radiation survey when the facility is ready for patient imaging. The licensee shall provide a copy of the installation radiation survey to the Agency within 30 days of imaging the first patient.
- C. The licensee shall use engineering controls or shield each PET use area with protective barriers necessary to comply with the radiation exposure limits in R12-1-408 and R12-1-416.
 - 1. At the time of application for a new license or amendment to an existing license, and before imaging of the first patient, the licensee shall provide to the Agency a copy of the installation report signed by the contractor who installed the shielding material recommended by a person meeting the requirements in subsection (B) and a copy of the installation radiation survey required in subsection (B).
 - 2. The licensee shall perform shielding calculations in accordance with *AAPM Task Group 108: PET and PET/CT Shielding Requirements*, in *Medical Physics*, Vol. 33, No. 1, January 2006, which is incorporated by reference, published by the American Association of Physicists in Medicine, One Physics Ellipse, College Park, MD 20740, and on file with the Agency. This incorporation by reference contains no future editions or amendments. In lieu of these procedures, the licensee may use equivalent calculations approved by the Agency.
- D. As part of the annual ALARA review required in R12-1-407, the licensee shall document a review of the PET patient workload and associated change, if any, in public exposure resulting from the installed facility shielding and other public radiation exposure controls in use at the time of the review.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-717. Release of Individuals Containing Radioactive Material or Implants Containing Radioactive Material

- A. A licensee may authorize the release from its control of any individual who has been administered unsealed radioactive material or implants containing radioactive material, if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 millisieverts (0.5 rem).
- B. A licensee shall provide the released individual, or the individual's parent or guardian, with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 1 millisievert (0.1 rem). If the total effective dose equivalent to a nursing infant or child could exceed 1 millisievert (0.1 rem) assuming there were no interruption of breast-feeding, the instructions shall also include:
 1. Guidance on the interruption or discontinuation of breast-feeding; and
 2. Information on the potential consequences, if any, of failure to follow the guidance.
- C. A licensee shall maintain a record of the basis for authorizing the release of an individual and instructions provided to a breast-feeding female for three years from the date of the administration performed under subsection (A). Nothing in this rule relieves the licensee from the personnel exposure requirements in Article 4.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-718. Mobile Medical Service

- A. A licensee providing mobile medical service shall:
 1. Obtain a letter signed by the management of each client for which services are rendered that permits the use of radioactive material at the client's address and clearly delineates the authority and responsibility of the licensee and the client;
 2. Check instruments used to measure the activity of unsealed radioactive material for proper function before medical use at each client's address or on each day of use, whichever is more frequent. At a minimum, the check for proper function required by this subsection shall include a constancy check;
 3. Check survey instruments for proper operation with a dedicated check source before use at each client's address; and
 4. Before leaving a client's address, survey all areas of use to ensure compliance with the requirements in Article 4 of this Chapter.
- B. A mobile medical service may not have radioactive material delivered from the manufacturer or the distributor to the client unless the client has a license allowing its possession. If appli-

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cable, radioactive material delivered to the client shall be received and handled in conformance with the client's license.

- C. A licensee providing mobile medical services shall retain the letter required in subsection (A)(1) and the record of each survey required in subsection (A)(4) for three years from the date of the survey.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-719. Training for Uptake, Dilution, and Excretion Studies

- A. Except as provided in R12-1-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 100 to be a physician who:

1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(3). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Complete 60 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies as described in subsection (A)(3); and
 - b. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or
2. Is an authorized user under R12-1-721, R12-1-723, NRC, or equivalent Agreement State requirements; or
3. Has completed 60 hours of training and experience, including a minimum of eight hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies. The training and experience must include:

- a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
- b. Work experience, under the supervision of an authorized user who meets the requirements in this Article, NRC, or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
 - iii. Calculating, measuring, and safely preparing patient or human research subject dosages;

- iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
 - v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
 - vi. Administering dosages of radioactive drugs to patients or human research subjects; and
- c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements of R12-1-710, R12-1-719, R12-1-721, or R12-1-723, NRC, or equivalent Agreement State requirements; that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(3) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article.

- B. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.
- C. Individuals who, under R12-1-710(B), need not comply with training requirements described in this Section may serve as preceptors for, and supervisors of, applicants seeking authorization on Agency licenses for the same uses for which these individuals are authorized.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-720. Permissible Molybdenum-99, Strontium-82, and Strontium-85 Concentrations

- A. A licensee may not administer to humans a radiopharmaceutical that contains more than 0.15 kilobecquerel of molybdenum-99 per megabecquerel of technetium-99m (0.15 microcurie of molybdenum-99 per millicurie of technetium-99m) or, more than 0.02 kilobecquerel of strontium-82 per megabecquerel of rubidium-82 chloride injection (0.02 microcurie of strontium-82 per millicurie of rubidium-82 chloride); or more than 0.2 kilobecquerel of strontium-85 per megabecquerel of rubidium-82 chloride injection (0.2 microcurie of strontium-85 per millicurie of rubidium-82).
- B. A licensee that uses molybdenum-99/technetium-99m generators for preparing a technetium-99m radiopharmaceutical shall measure the molybdenum-99 concentration of the first eluate after receipt of a generator to demonstrate compliance with subsection (A).
- C. A licensee that uses a strontium-82/rubidium-82 generator for preparing a rubidium-82 radiopharmaceutical shall, before the first patient use of the day, measure the concentration of radionuclides strontium-82 and strontium-85 to demonstrate compliance with subsection (A).
- D. A licensee shall maintain a record of each molybdenum-99 concentration measurement or strontium-82 and strontium-85 concentrations measurements for three years following completion of the measurement.

Historical Note

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 13 A.A.R.

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1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-721. Training for Imaging and Localization Studies Not Requiring a Written Directive

- A.** Except as provided in R12-1-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 200 to be a physician who:
1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(3). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for imaging and localization studies as described in subsection (3); and
 - b. Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or
 2. Is an authorized user under this Chapter and R12-1-723, NRC, or equivalent Agreement State requirements; or
 3. Has completed 700 hours of training and experience, including a minimum of 80 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for imaging and localization studies. The training and experience must include:
 - a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. Work experience, under the supervision of an authorized user who meets the requirements in R12-1-710, R12-1-721, or R12-1-723 and R12-1-721(A)(3)(b)(vii), NRC, or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
 - iii. Calculating, measuring, and safely preparing patient or human research subject dosages;
 - iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
 - v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
 - vi. Administering dosages of radioactive drugs to patients or human research subjects; and
 - vii. Eluting generator systems appropriate for preparation of radioactive drugs for imaging

and localization studies, measuring and testing the elate for radionuclide purity, and processing the elate with reagent kits to prepare labeled radioactive drugs; and,

- c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements as an authorized user for Exhibit A group 200 nuclides, NRC, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(3) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article.

- B.** The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-722. Safety Instruction and Precautions for Use of Unsealed Radioactive Material Requiring a Written Directive

- A.** A licensee shall provide radiation safety instruction, initially and at least annually, for all personnel caring for the patient or human research subject receiving radiopharmaceutical therapy and hospitalized for compliance with R12-1-717. To satisfy this requirement, the instruction shall describe the licensee's procedures for:
1. Patient or human research subject control;
 2. Visitor control;
 3. Contamination control;
 4. Waste control; and
- B.** For each patient or human research subject who cannot be released under R12-1-717, a licensee shall:
1. Quarter the patient or the human research subject in a private room with a private sanitary facility;
 2. Visibly post the patient's or the human research subject's room with a "Radioactive Materials" sign.
 3. Note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or the human research subject's room; and
 4. Monitor material and items removed from the patient's or the human research subject's room to determine that their radioactivity cannot be distinguished from the natural background radiation level with a radiation detection survey instrument set on its most sensitive scale and with no interposed shielding, or handle the material and items as radioactive waste.
- C.** A licensee shall notify the radiation safety officer, or his or her designee, and the authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.
- D.** A licensee shall retain records of instruction and safety procedures performed under this rule for three years from the date of the activity.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-723. Training for Use of Unsealed Radioactive Material Requiring a Written Directive, Including Treatment of Hyperthyroidism, and Treatment of Thyroid Carcinoma

- A.** Except as provided in R12-1-710, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under Group 300 to be a physician who:
1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(2). To have its certification process recognized, a specialty board shall require all candidates for certification to:
 - a. Successfully complete residency training in a radiation therapy or nuclear medicine training program or a program in a related medical specialty. These residency training programs must include 700 hours of training and experience as described in (A)(2). Eligible training programs must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and Surgeons of Canada, or the Committee on Post-Graduate Training of the American Osteopathic Association; and
 - b. Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, and quality assurance, and clinical use of unsealed radioactive material for which a written directive is required; or
 2. Has completed 700 hours of training and experience, including a minimum of 200 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material requiring a written directive. The training and experience must include:
 - a. Classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. Work experience, under the supervision of an authorized user who meets the requirements in this Article, NRC, or equivalent Agreement State requirements, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
 - iii. Calculating, measuring, and safely preparing patient or human research subject dosages;
 - iv. Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
 - v. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures;
 - vi. Administering dosages of radioactive drugs to patients or human research subjects involving a minimum of three cases in each of the following categories for which the individual is requesting authorized user status:
 - (1) Oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131, for which a written directive is required (Experience with at least three cases in Category (A)(2)(b)(vi)(2) also satisfies this requirement);
 - (2) Oral administration of greater than 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131;
 - (3) Parenteral administration of any beta emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required; and/or
 - (4) Parenteral administration of any other radionuclide, for which a written directive is required; and
 - c. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements as an authorized user for Exhibit A group 300 nuclides, NRC, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(2) and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under Exhibit A of this Article. The written attestation must be signed by a preceptor authorized user who meets the requirements in this Section, NRC, or equivalent Agreement State requirements. The preceptor authorized user, who meets the requirements in subsection (B) must have experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status.
- B.** Except as provided in R12-1-710, a licensee shall require an authorized user of iodine-131 for the oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries) to be a physician who has completed the training requirements in 10 CFR 35.392, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** Except as provided in R12-1-710, a licensee shall require an authorized user of iodine-131 for the oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries) to be a physician who has completed the training requirements in 10 CFR 35.394, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- D.** Except as provided in R12-1-710, a licensee shall require an authorized user for the parenteral administration of unsealed radioactive material requiring a written directive to be a physician who has completed the training requirements in 10 CFR 35.396, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- E.** The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

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Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-724. Surveys after Brachytherapy Source Implant and Removal; Accountability

- A. A licensee shall make a survey to locate and account for all sources that have not been implanted immediately after implanting sources in a patient or a human research subject.
- B. A licensee shall make a survey of the patient or the human research subject with a radiation detection survey instrument immediately after removing the last temporary implant source to confirm that all sources have been removed.
- C. A licensee shall maintain accountability at all times for all sources in storage or use.
- D. A licensee shall return brachytherapy sources to a secure storage area as soon as possible after removing sources from a patient or a human research subject.
- E. A licensee shall record the procedures performed in subsections (A) through (D) and retain the records for three years following completion of the record.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-725. Safety Instructions and Precautions for Brachytherapy Patients that Cannot be Released Under R12-1-717

- A. In addition to the training requirements in Article 10, a licensee shall provide radiation safety instruction, initially and at least annually, to personnel caring for patients or human research subjects who are receiving brachytherapy and cannot be released under R12-1-717. To satisfy this requirement, the instruction shall be commensurate with the duties of the personnel and include the:
 1. Size and appearance of the brachytherapy sources;
 2. Safe handling and shielding instructions;
 3. Patient or human research subject control;
 4. Visitor control, including both:
 - a. Routine visitation of hospitalized individuals in accordance with Article 4 of this Chapter,
 - b. Visitation authorized in accordance with Article 4 of this Chapter, and
 5. Notification of the radiation safety officer, or his or her designee, and an authorized user if the patient or the human research subject has a medical emergency or dies.
- B. For each patient or human research subject who is receiving brachytherapy and cannot be released under R12-1-717, a licensee shall:
 1. Not quarter the patient or the human research subject in the same room as an individual who is not receiving brachytherapy;
 2. Visibly post the patient's or human research subject's room with a "Radioactive Materials" sign; and
 3. Note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or human research subject's room.
- C. A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source:
 1. Dislodged from the patient; and
 2. Lodged within the patient following removal of the source applicators.
- D. A licensee shall notify the radiation safety officer, or the RSO's designee, and an authorized user as soon as possible if

the patient or human research subject has a medical emergency or dies.

- E. A licensee shall record the instructions given under subsection (A) and retain the records for three years after recording the instructions.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-726. Calibration Measurements of Brachytherapy Sources, Decay of Sources Used for Ophthalmic Treatments, and Computerized Treatment Planning Systems

- A. Before the first medical use of a brachytherapy source after the effective date of this rule, a licensee shall have:
 1. Determined the source output or activity using a dosimetry system that meets the requirements of R12-1-733(A);
 2. Determined source positioning accuracy within applicators; and
 3. Used published protocols currently accepted by nationally recognized bodies to meet the requirements of subsections (A)(1) and (A)(2).
- B. A licensee may use measurements provided by the source manufacturer or by a calibration laboratory accredited by the American Association of Physicists in Medicine that are made in accordance with subsection (A).
- C. A licensee shall mathematically correct the outputs or activities determined in subsection (A) for physical decay at intervals consistent with one percent physical decay.
- D. Only an authorized medical physicist shall calculate the activity of each strontium-90 source that is used to determine the treatment times for ophthalmic treatments. The decay shall be based on the activity determined under subsection (A).
- E. A licensee shall perform acceptance testing on the treatment planning system of therapy-related computer systems in accordance with published protocols accepted by nationally recognized bodies. At a minimum, the acceptance testing shall include, as applicable, verification of:
 1. The source-specific input parameters required by the dose calculation algorithm;
 2. The accuracy of dose, dwell time, and treatment time calculations at representative points;
 3. The accuracy of isodose plots and graphic displays; and
 4. The accuracy of the software used to determine sealed source positions from radiographic images.
- F. A licensee shall retain records of each source activity determination and ophthalmic source decay correction, and documentation of the acceptance testing protocol required under subsection (E) for three years after the date of the procedure required in subsections (A) and (D), and for the records created in conjunction with subsection (E), the record shall be maintained for three years from the last date of the protocol's use.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-727. Training for Use of Manual Brachytherapy Sources and Training for the Use of Strontium-90 Sources for Treatment of Ophthalmic Disease

- A. Except as provided in R12-1-710, the licensee shall require an authorized user of a manual brachytherapy source for the uses authorized under this Article to be a physician who:
 1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(2). To have its certification process recog-

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nized, a specialty board shall require all candidates for certification to:

- a. Successfully complete a minimum of three years of residency training in a radiation oncology program approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and
 - b. Pass an examination, administered by diplomates of the specialty board, that tests knowledge and competence in radiation safety, radionuclide handling, treatment planning, quality assurance, and clinical use of manual brachytherapy; or
2. Has completed a structured educational program in basic radionuclide handling techniques applicable to the use of manual brachytherapy sources that includes:
 - a. 200 hours of classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Radiation biology; and
 - b. 500 hours of work experience, under the supervision of an authorized user who meets the requirements in this Section, or equivalent NRC or Agreement State requirements at a medical institution, involving:
 - i. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
 - ii. Checking survey meters for proper operation;
 - iii. Preparing, implanting, and removing brachytherapy sources;
 - iv. Maintaining running inventories of material on hand;
 - v. Using administrative controls to prevent a medical event involving the use of radioactive material;
 - vi. Using emergency procedures to control radioactive material; and
 - c. Has completed three years of supervised clinical experience in radiation oncology, under an authorized user who meets the requirements in this Section, or equivalent Agreement State requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-doctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by subsection (A)(2)(b); and
 - d. Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in this Section, NRC, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(2) and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under Exhibit A of this Article.
- B. Except as provided in R12-1-710, a licensee shall require an authorized user of strontium-90 for ophthalmic radiotherapy to

be a physician who has completed the training requirements in 10 CFR 35.491, January 1, 2013, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

- C. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-728. Training for Use of Sealed Sources for Diagnosis

- A. Except as provided in R12-1-710, the licensee shall require the authorized user of a diagnostic sealed source for use in a device authorized under Group 500 to be a physician, dentist, or podiatrist who is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsections (A)(1) and (2); or
 1. Has completed eight hours of classroom and laboratory training in basic radionuclide handling techniques specifically applicable to the use of the device. The training must include:
 - a. Radiation physics and instrumentation;
 - b. Radiation protection;
 - c. Mathematics pertaining to the use and measurement of radioactivity;
 - d. Radiation biology; and
 2. Has completed training in the use of the device for the uses requested.
- B. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-729. Surveys of Patients and Human Research Subjects Treated with a Remote Afterloader Unit

- A. Before releasing a patient or a human research subject from licensee control, a licensee shall survey the patient or the human research subject and the remote afterloader unit with a portable radiation detection survey instrument to confirm that each source has been removed from the patient or human research subject and returned to the safe shielded position.
- B. A licensee shall make records of these surveys conducted under subsection (A) and retain them for three years from the date of each survey.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-730. Installation, Maintenance, Adjustment, and Repair of an Afterloader Unit, Teletherapy Unit, or Gamma Stereotactic Radiosurgery Unit

- A. Only a person specifically licensed by the Agency, NRC, or an Agreement State shall install, maintain, adjust, or repair a remote afterloader unit, teletherapy unit, or gamma stereotac-

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tic radiosurgery unit that involves work on any source shielding, the source's driving unit, or other electronic or mechanical component that could expose a source, reduce the shielding around a source, or compromise the radiation safety of a unit or a source.

- B. Except for low dose-rate remote afterloader units, only a person specifically licensed by the Agency, NRC, or an Agreement State shall install, replace, relocate, or remove a sealed source or source contained in other remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units.
- C. For a low dose-rate remote afterloader unit, only a person specifically licensed by the Agency, NRC, or an Agreement State or an authorized medical physicist shall install, replace, relocate, or remove a sealed source contained in the unit.
- D. A licensee shall retain a record of the installation, maintenance, adjustment, and repair of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units for three years from the completion date of the activity listed in this Section.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-731. Safety Procedures and Instructions for Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units

- A. A licensee shall:
 1. Secure the unit, the console, the console keys, and the treatment room when not in use or unattended;
 2. Permit only individuals approved by the authorized user, radiation safety officer, or authorized medical physicist to be present in the treatment room during treatment with a source;
 3. Prevent dual operation of more than one radiation producing device in a treatment room if applicable; and
 4. Develop, implement, and maintain written procedures for responding to an abnormal situation when the operator is unable to place a source in the shielded position, or remove the patient or human research subject from the radiation field with controls from outside the treatment room. These procedures shall include:
 - a. Instructions for responding to equipment failures and the names of the individuals responsible for implementing corrective actions;
 - b. The process for restricting access to and posting of the treatment area to minimize the risk of inadvertent exposure; and
 - c. The names and telephone numbers of the authorized users, the authorized medical physicist, and the radiation safety officer to be contacted if the unit or console operates abnormally.
- B. A licensee shall post instructions at the unit console to inform the operator of:
 1. The location of the procedures required by subsection (A)(4); and
 2. The names and telephone numbers of the authorized users, the authorized medical physicist, and the radiation safety officer to be contacted if the unit or console operates abnormally.
- C. A licensee shall provide instruction, initially and at least annually, to all individuals who operate the unit, as appropriate to the individual's assigned duties, in:
 1. The procedures identified in subsection (A)(4); and
 2. The operating procedures for the unit.

- D. A licensee shall ensure that operators, authorized medical physicists, and authorized users participate in drills of the emergency procedures, initially and at least annually.
- E. A licensee shall retain a record of individuals receiving instruction required by subsection (C) for three years from the date of the instruction.
- F. A licensee shall maintain a copy of the procedures required by subsections (A)(4) and (C)(2) for Agency review. The copy shall be maintained for three years beyond the termination date of the activities for which the procedures were written.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-732. Safety Precautions for Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units

- A. A licensee shall control access at each entrance to a treatment room.
- B. A licensee shall equip each entrance to the treatment room with an electrical interlock system that will:
 1. Prevent the operator from initiating the treatment cycle unless each treatment room entrance door is closed;
 2. Cause each source to be shielded when an entrance door is opened; and
 3. Prevent any source from being exposed following an interlock interruption until all treatment room entrance doors are closed and the source's on-off control is reset at the console.
- C. A licensee shall require any individual entering the treatment room to assure, through the use of appropriate radiation monitors, that radiation levels have returned to ambient levels.
- D. Except for low-dose remote afterloader units, a licensee shall construct or equip each treatment room with viewing and intercom systems to permit continuous observation of the patient or the human research subject from the treatment console during irradiation.
- E. For licensed activities where sources are placed within the patient's or human research subject's body, a licensee shall only conduct treatments which allow for expeditious removal of a decoupled or jammed source.
- F. In addition to the requirements specified in subsections (A) through (E), a licensee shall:
 1. For medium dose-rate and pulsed dose-rate remote afterloader units, require:
 - a. An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who has been trained in the operation and emergency response for the unit, to be physically present during the initiation of all patient treatments involving the unit; and
 - b. An authorized medical physicist and either an authorized user or an individual, under the supervision of an authorized user, who has been trained to remove each source applicator in the event of an emergency involving the unit, to be immediately available during continuation of all patient treatments involving the unit.
 2. For high dose-rate remote afterloader units, require:
 - a. An authorized user and an authorized medical physicist to be physically present during the initiation of all patient treatments involving the unit; and
 - b. An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who has been trained in the operation and emergency response for the unit, to be

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physically present during continuation of all patient treatments involving the unit.

3. For gamma stereotactic radiosurgery units, require an authorized user and an authorized medical physicist to be physically present throughout all patient treatments involving the unit. As used in this provision, physically present means to be within hearing distance of normal voice, and does not include the use of portable communication devices, intercoms, or other devices that could be used to amplify the human voice.
 4. Notify the radiation safety officer, or radiation safety officer's designee, and an authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.
- G.** A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source:
1. Remaining in the unshielded position; or
 2. Lodged within the patient following completion of the treatment.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-733. Dosimetry Equipment

- A.** Except for low dose-rate remote afterloader sources where the source output or activity is determined by the manufacturer, a licensee shall have a calibrated dosimetry system available for use. To satisfy this requirement, one of the following two conditions shall be met.
1. The system shall have been calibrated using a system or source traceable to the National Institute of Science and Technology (NIST) and published protocols accepted by nationally recognized bodies; or by a calibration laboratory accredited by the American Association of Physicists in Medicine (AAPM). The calibration shall have been performed within the previous two years and after any servicing that may have affected system calibration; or
 2. The system shall have been calibrated within the previous four years. Eighteen to 30 months after that calibration, the system shall have been intercompared with another dosimetry system that was calibrated within the past 24 months by NIST or by a calibration laboratory accredited by the AAPM. The results of the intercomparison shall indicate that the calibration factor of the licensee's system had not changed by more than two percent. The licensee may not use the intercomparison result to change the calibration factor. When intercomparing dosimetry systems to be used for calibrating sealed sources for therapeutic units, the licensee shall use a comparable unit with beam attenuators or collimators, as applicable, and sources of the same radionuclide as the source used at the licensee's facility.
- B.** The licensee shall have a dosimetry system available for use for spot-check output measurements, if applicable. To satisfy this requirement, the system may be compared with a system that has been calibrated in accordance with subsection (A). This comparison shall have been performed within the previous year and after each servicing that may have affected system calibration. The spot-check system may be the same system used to meet the requirement in subsection (A).
- C.** The licensee shall retain, for three years from the date of the procedure, a record of each calibration, intercomparison, and comparison.

Historical Note

New Section made by final rulemaking at 13 A.A.R.

1217, effective May 5, 2007 (Supp. 07-1).

R12-1-734. Full Calibration Measurements on Teletherapy Units

- A.** A licensee authorized to use a teletherapy unit for medical use shall perform full calibration measurements on each teletherapy unit:
1. Before the first medical use of the unit; and
 2. Before medical use under the following conditions:
 - a. Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output obtained at the last full calibration corrected mathematically for radioactive decay;
 - b. Following replacement of the source or following reinstallation of the teletherapy unit in a new location;
 - c. Following any repair of the teletherapy unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
 3. At intervals not exceeding one year.
- B.** To satisfy the requirement of subsection (A), full calibration measurements shall include determination of:
1. The output within ± 3 percent for the range of field sizes and for the distance or range of distances used for medical use;
 2. The coincidence of the radiation field and the field indicated by the light beam localizing device;
 3. The uniformity of the radiation field and its dependence on the orientation of the useful beam;
 4. Timer accuracy and linearity over the range of use;
 5. On-off error; and
 6. The accuracy of all distance measuring and localization devices in medical use.
- C.** A licensee shall use the dosimetry system described in R12-1-733(A) to measure the output for one set of exposure conditions. The remaining radiation measurements required in subsection (B)(1) may be made using a dosimetry system that indicates relative dose rates.
- D.** A licensee shall make full calibration measurements required by subsection (A) in accordance with published protocols accepted by nationally recognized bodies.
- E.** A licensee shall mathematically correct the outputs determined in subsection (B)(1) for physical decay for intervals not exceeding one month for cobalt-60, six months for cesium-137, or at intervals consistent with 1 percent decay for all other nuclides.
- F.** Full calibration measurements required by subsection (A) and physical decay corrections required by subsection (E) shall be performed by an authorized medical physicist.
- G.** A licensee shall retain a record of each calibration for three years from the date it was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-735. Full Calibration Measurements on Remote Afterloader Units

- A.** A licensee authorized to use a remote afterloader unit for medical use shall perform full calibration measurements on each unit:
1. Before the first medical use of the unit;
 2. Before medical use under the following conditions:
 - a. Following replacement of the source or following reinstallation of the unit in a new location outside the facility; and

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- b. Following any repair of the unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
 - 3. At intervals not exceeding one quarter for high dose-rate, medium dose-rate, and pulsed dose-rate remote afterloader units with sources whose half-life exceeds 75 days; and
 - 4. At intervals not exceeding one year for low dose-rate remote afterloader units.
- B.** To satisfy the requirement of subsection (A), full calibration measurements shall include, as applicable, determination of:
- 1. The output within ± 5 percent;
 - 2. Source positioning accuracy to within ± 1 millimeter;
 - 3. Source retraction with backup battery upon power failure;
 - 4. Length of the source transfer tubes;
 - 5. Timer accuracy and linearity over the typical range of use;
 - 6. Length of the applicators; and
 - 7. Function of the source transfer tubes, applicators, and transfer tube-applicator interfaces.
- C.** A licensee shall use the dosimetry system described in R12-1-733(A) to measure the output.
- D.** A licensee shall make full calibration measurements required by subsection (A) in accordance with published protocols accepted by nationally recognized bodies.
- E.** In addition to the requirements for full calibrations for low dose-rate remote afterloader units in subsection (B), a licensee shall perform an autoradiograph of the sources to verify inventory and source arrangement at intervals not exceeding one quarter.
- F.** For low dose-rate remote afterloader units, a licensee may use measurements provided by the source manufacturer that are made in accordance with subsections (A) through (E).
- G.** A licensee shall mathematically correct the outputs determined in subsection (B)(1) for physical decay at intervals consistent with 1 percent physical decay.
- H.** Full calibration measurements required by subsection (A) and physical decay corrections required by subsection (G) shall be performed by an authorized medical physicist.
- I.** A licensee shall retain a record of each calibration for three years from the date it was completed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-736. Full Calibration Measurements on Gamma Stereotactic Radiosurgery Units

- A.** A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform full calibration measurements on each unit:
- 1. Before the first medical use of the unit;
 - 2. Before medical use under the following conditions:
 - a. Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output obtained at the last full calibration corrected mathematically for radioactive decay;
 - b. Following replacement of the sources or following reinstallation of the gamma stereotactic radiosurgery unit in a new location; and
 - c. Following any repair of the gamma stereotactic radiosurgery unit that includes removal of the sources or major repair of the components associated with the source assembly; and
 - 3. At intervals not exceeding one year, with the exception that relative helmet factors need only be determined

before the first medical use of a helmet and following any damage to a helmet.

- B.** To satisfy the requirement of subsection (A), full calibration measurements shall include determination of:
- 1. The output within ± 3 percent;
 - 2. Relative helmet factors;
 - 3. Isocenter coincidence;
 - 4. Timer accuracy and linearity over the range of use;
 - 5. On-off error;
 - 6. Trunnion centricity;
 - 7. Treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;
 - 8. Helmet microswitches;
 - 9. Emergency timing circuits; and
 - 10. Stereotactic frames and localizing devices (trunnions).
- C.** A licensee shall use the dosimetry system described in R12-1-733(A) to measure the output for one set of exposure conditions. The remaining radiation measurements required in subsection (B)(1) may be made using a dosimetry system that indicates relative dose rates.
- D.** A licensee shall make full calibration measurements required by subsection (A) in accordance with published protocols accepted by nationally recognized bodies.
- E.** A licensee shall mathematically correct the outputs determined in subsection (B)(1) at intervals not exceeding one month for cobalt-60 and at intervals consistent with 1 percent physical decay for all other radionuclides.
- F.** Full calibration measurements required by subsection (A) and physical decay corrections required by subsection (E) shall be performed by an authorized medical physicist.
- G.** A licensee shall retain a record of each calibration for three years from the date of the procedure.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-737. Periodic Spot-checks for Teletherapy Units

- A.** A licensee authorized to use teletherapy units for medical use shall perform output spot-checks on each teletherapy unit once in each calendar month that include determination of:
- 1. Timer accuracy, and timer linearity over the range of use;
 - 2. On-off error;
 - 3. The coincidence of the radiation field and the field indicated by the light beam localizing device;
 - 4. The accuracy of all distance measuring and localization devices used for medical use;
 - 5. The output for one typical set of operating conditions measured with the dosimetry system described in R12-1-733(B); and
 - 6. The difference between the measurement made in subsection (A)(5) and the anticipated output, expressed as a percentage of the anticipated output.
- B.** A licensee shall perform measurements required by subsection (A) in accordance with written procedures established by an authorized medical physicist. That individual need not actually perform the spot-check measurements.
- C.** A licensee shall have an authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.
- D.** A licensee authorized to use a teletherapy unit for medical use shall perform safety spot-checks of each teletherapy facility once in each calendar month and after each source installation to assure proper operation of:
- 1. Electrical interlocks at each teletherapy room entrance;

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2. Electrical or mechanical stops installed for the purpose of limiting use of the primary beam of radiation (restriction of source housing angulation or elevation, carriage or stand travel and operation of the beam on-off mechanism);
 3. Source exposure indicator lights on the teletherapy unit, on the control console, and in the facility;
 4. Viewing and intercom systems;
 5. Treatment room doors from inside and outside the treatment room; and
 6. Electrically assisted treatment room doors with the teletherapy unit electrical power turned off.
- E.** If the results of the checks required in subsection (D) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- F.** A licensee shall retain a record of each spot-check required by subsections (A) and (D) for three years from the date of the procedure, and a copy of the procedures required by subsection (B) until licensee terminates all medical activities involving the teletherapy unit.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-738. Periodic Spot-checks for Remote Afterloader Units

- A.** A licensee authorized to use a remote afterloader unit for medical use shall perform spot-checks of each remote afterloader facility and on each unit:
1. Before the first use of a high dose-rate, medium dose-rate, or pulsed dose-rate remote afterloader unit on a given day;
 2. Before each patient treatment with a low dose-rate remote afterloader unit; and
 3. After each source installation.
- B.** A licensee shall perform the measurements required by subsection (A) in accordance with written procedures established by an authorized medical physicist. That individual need not actually perform the spot-check measurements.
- C.** A licensee shall have an authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.
- D.** To satisfy the requirements of subsection (A), spot-checks shall, at a minimum, assure proper operation of:
1. Electrical interlocks at each remote afterloader unit room entrance;
 2. Source exposure indicator lights on the remote afterloader unit, on the control console, and in the facility;
 3. Viewing and intercom systems in each high dose-rate, medium dose-rate, and pulsed dose-rate remote afterloader facility;
 4. Emergency response equipment;
 5. Radiation monitors used to indicate the source position;
 6. Timer accuracy;
 7. Clock (date and time) in the unit's computer; and
 8. Decayed source activity in the unit's computer.
- E.** If the results of the checks required in subsection (D) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- F.** A licensee shall retain a record of each spot-check required by subsections (A) and (D) for three years from the date of the

procedure, and a copy of the procedures required by subsection (B) until licensee terminates all medical activities involving the afterloader unit.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-739. Periodic Spot-checks for Gamma Stereotactic Radiosurgery Units

- A.** A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform spot-checks of each gamma stereotactic radiosurgery facility and on each unit:
1. Monthly;
 2. Before the first use of the unit on a given day; and
 3. After each source installation.
- B.** A licensee shall:
1. Perform the measurements required by subsection (A) in accordance with written procedures established by an authorized medical physicist. That individual need not actually perform the spot-check measurements.
 2. Have the authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.
- C.** To satisfy the requirements of subsection (A)(1), spot-checks shall, at a minimum:
1. Assure proper operation of:
 - a. Treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;
 - b. Helmet microswitches;
 - c. Emergency timing circuits; and
 - d. Stereotactic frames and localizing devices (trunnions).
 2. Determine:
 - a. The output for one typical set of operating conditions measured with the dosimetry system described in R12-1-733(B);
 - b. The difference between the measurement made in subsection (C)(2)(a) and the anticipated output, expressed as a percentage of the anticipated output;
 - c. Source output against computer calculation;
 - d. Timer accuracy and linearity over the range of use;
 - e. On-off error; and
 - f. Trunnion centricity.
- D.** To satisfy the requirements of subsections (A)(2) and (A)(3), spot-checks shall assure proper operation of:
1. Electrical interlocks at each gamma stereotactic radiosurgery room entrance;
 2. Source exposure indicator lights on the gamma stereotactic radiosurgery unit, on the control console, and in the facility;
 3. Viewing and intercom systems;
 4. Timer termination;
 5. Radiation monitors used to indicate room exposures; and
 6. Emergency off buttons.
- E.** A licensee shall arrange for the repair of any system identified in subsection (C) that is not operating properly as soon as possible.
- F.** If the results of the checks required in subsection (D) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- G.** A licensee shall retain a record of each check required by subsections (C) and (D) for three years from the date of the procedure, and a copy of the procedures required by subsection (B)

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until licensee terminates all medical activities involving the radiosurgery unit.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-740. Additional Requirements for Mobile Remote Afterloader Units

- A.** A licensee providing mobile remote afterloader service shall:
1. Check survey instruments before medical use at each address of use or on each day of use, whichever is more frequent; and
 2. Account for all sources before departure from a client's address of use.
- B.** In addition to the periodic spot-checks required by R12-1-738, a licensee authorized to use mobile afterloaders for medical use shall perform checks on each remote afterloader unit before use at each address of use. At a minimum, checks shall be made to verify the operation of:
1. Electrical interlocks on treatment area access points;
 2. Source exposure indicator lights on the remote afterloader unit, on the control console, and in the facility;
 3. Viewing and intercom systems;
 4. Applicators, source transfer tubes, and transfer tube-applicator interfaces;
 5. Radiation monitors used to indicate room exposures;
 6. Source positioning (accuracy); and
 7. Radiation monitors used to indicate whether the source has returned to a safe shielded position.
- C.** In addition to the requirements for checks in subsection (B), a licensee shall ensure overall proper operation of the remote afterloader unit by conducting a simulated cycle of treatment before use at each address of use.
- D.** If the results of the checks required in subsection (B) indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.
- E.** A licensee shall retain a record of each check required by subsection (B) for three years from the date of the procedure.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-741. Additional Radiation Surveys of Sealed Sources used in Radiation Therapy

- A.** In addition to the survey requirement in Article 4 of this Chapter, a person licensed to use sealed sources in the practice of radiation therapy shall make surveys to ensure that the maximum radiation levels and average radiation levels from the surface of the main source safe with each source in the shielded position do not exceed the levels stated in the Sealed Source and Device Registry.
- B.** A licensee shall make the survey required by subsection (A) at installation of a new source and following repairs to any source shielding, a source's driving unit, or other electronic or mechanical component that could expose the source, reduce the shielding around a source, or compromise the radiation safety of the unit or the source.
- C.** A licensee shall retain a record of the radiation surveys required by subsection (A) for three years from the date of each survey.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-742. Five-year Inspection for Teletherapy and Gamma Stereotactic Radiosurgery Units

- A.** A licensee shall have each teletherapy unit and gamma stereotactic radiosurgery unit fully inspected and serviced during source replacement or at intervals not to exceed five years, whichever comes first, to assure proper functioning of the source exposure mechanism.
- B.** This inspection and servicing may only be performed by persons specifically licensed to do so by the Agency, NRC, or an Agreement State.
- C.** A licensee shall keep a record of each five-year inspection for three years from the date of the inspection, if the inspection determined that service was unnecessary, and three years from the date of the completed service if the inspection determined that service was needed.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-743. Therapy-related Computer Systems

The licensee shall perform acceptance testing on the treatment planning system of therapy-related computer systems in accordance with published protocols accepted by nationally recognized bodies. At a minimum, the acceptance testing shall include, as applicable, verification of:

1. The source-specific input parameters required by the dose calculation algorithm;
2. The accuracy of dose, dwell time, and treatment time calculations at representative points;
3. The accuracy of isodose plots and graphic displays;
4. The accuracy of the software used to determine sealed source positions from radiographic images; and
5. The accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-744. Training for Use of Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units

- A.** Except as provided in R12-1-710, a licensee shall require an authorized user of a sealed source for a use authorized under Group 600 to be a physician who:
1. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an Agreement State and who meets the requirements in subsection (A)(2). To have its certification process recognized, a specialty board shall require all candidates to:
 - a. Successfully complete a minimum of three years of residency training in a radiation therapy program approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and
 - b. Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, treatment planning, quality assurance, and clinical use of stereotactic radiosurgery, remote afterloaders and external beam therapy; or

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2. Has completed a structured educational program in basic radionuclide techniques applicable to the use of a sealed source in a therapeutic medical unit that includes:
 - a. 200 hours of classroom and laboratory training in the following areas:
 - i. Radiation physics and instrumentation;
 - ii. Radiation protection;
 - iii. Mathematics pertaining to the use and measurement of radioactivity;
 - iv. Chemistry of radioactive material for medical use; and
 - v. Radiation biology; and
 - b. 500 hours of work experience, under the supervision of an authorized user who meets the requirements in this Section, or equivalent Agreement State or NRC requirements at a medical institution, involving:
 - i. Reviewing full calibration measurements and periodic spot-checks;
 - ii. Preparing treatment plans and calculating treatment doses and times;
 - iii. Using administrative controls to prevent a medical event involving the use of radioactive material;
 - iv. Implementing emergency procedures to be followed in the event of the abnormal operation of the medical unit or console;
 - v. Checking and using survey meters; and
 - vi. Selecting the proper dose and how it is to be administered; and
 - c. Has completed three years of supervised clinical experience in radiation therapy, under an authorized user who meets the requirements in this Section, or equivalent Agreement State or NRC requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-doctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by subsection (A)(2)(b); and
 - d. Has obtained written attestation that the individual has satisfactorily completed the requirements in subsection (A)(1) or (A)(2), and has achieved a level of competency sufficient to function independently as an authorized user of each type of therapeutic medical unit for which the individual is requesting authorized user status. The written attestation must be signed by a preceptor authorized user who meets the requirements in this Section, or equivalent Agreement State or NRC requirements for an authorized user for each type of therapeutic medical unit for which the individual is requesting authorized user status; and
 - e. Has received training in device operation, safety procedures, and clinical use for the type(s) of use for which authorization is sought. This training requirement may be satisfied by satisfactory completion of a training program provided by the vendor for new users or by receiving training supervised by an authorized user or authorized medical physicist, as appropriate, who is authorized for the type(s) of use for which the individual is seeking authorization.
- B. The training and experience shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and experience since the required training and experience was completed.

Historical Note
New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-745. Report and Notification of a Medical Event

 - A. A licensee shall report any "medical" event, except for an event that results from patient intervention, in which the administration of radioactive material or radiation from radioactive material results in:
 1. A dose that differs from the prescribed dose or dose that would have resulted from the prescribed dosage by more than 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin; and
 - a. The total dose delivered differs from the prescribed dose by 20 percent or more;
 - b. The total dosage delivered differs from the prescribed dosage by 20 percent or more or falls outside the prescribed dosage range; or
 - c. The fractionated dose delivered differs from the prescribed dose, for a single fraction, by 50 percent or more.
 2. A dose that exceeds 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin from any of the following:
 - a. An administration of a wrong radiopharmaceutical containing radioactive material;
 - b. An administration of a radiopharmaceutical containing radioactive material by the wrong route of administration;
 - c. An administration of a dose or dosage to the wrong individual or human research subject;
 - d. An administration of a dose or dosage delivered by the wrong mode of treatment; or
 - e. A leaking sealed source.
 3. A dose to the skin or an organ or tissue other than the treatment site that exceeds by 0.5 Sv (50 rem) to an organ or tissue and 50 percent or more of the dose expected from the administration defined in the written directive (excluding, for permanent implants, seeds that were implanted in the correct site but migrated outside the treatment site).
 - B. A licensee shall report any event resulting from intervention of a patient or human research subject in which the administration of radioactive material or radiation from radioactive material results or will result in unintended permanent functional damage to an organ or a physiological system, as determined by a physician.
 - C. The licensee shall notify by telephone the Agency no later than the next calendar day after discovery of the medical event.
 - D. The licensee shall submit a written report to the Agency within 15 days after discovery of the medical event.
 1. The written report shall include:
 - a. The licensee's name;
 - b. The name of the prescribing physician;
 - c. A brief description of the event;
 - d. Why the event occurred;

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- e. The effect, if any, on each individual who received the administration;
 - f. What actions, if any, have been taken or are planned to prevent recurrence; and
 - g. Certification that the licensee notified each individual (or the individual's responsible relative or guardian), and if not, why not.
2. The report may not contain an individual's name or any other information that could lead to identification of the individual.
- E.** The licensee shall provide notification of the event to the referring physician and also notify the individual who is the subject of the medical event no later than 24 hours after its discovery, unless the referring physician personally informs the licensee either that he or she will inform the individual or that, based on medical judgment, telling the individual would be harmful. The licensee is not required to notify the individual without first consulting the referring physician. If the referring physician or the affected individual cannot be reached within 24 hours, the licensee shall notify the individual as soon as possible thereafter. The licensee may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the medical event, because of any delay in notification. To meet the requirements of this subsection, the notification of the individual who is the subject of the medical event may be made instead to that individual's responsible relative or guardian. If a verbal notification is made, the licensee shall inform the individual, or appropriate responsible relative or guardian, that a written description of the event can be obtained from the licensee upon request. The licensee shall provide such a written description if requested.
- F.** Aside from the notification requirement, nothing in this Section affects any rights or duties of licensees and physicians in relation to each other, to individuals affected by the medical event, or to that individual's responsible relatives or guardians.
- G.** A licensee shall:
- 1. Annotate a copy of the report provided to the Agency with the:
 - a. Name of the individual who is the subject of the event; and
 - b. Social Security number or other identification number, if one has been assigned, of the individual who is the subject of the event; and
 - 2. Provide a copy of the annotated report to the referring physician, if other than the licensee, no later than 15 days after the discovery of the event.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-746. Report and Notification of a Dose to an Embryo, Fetus, or Nursing Child

- A.** A licensee shall report any dose to an embryo/fetus that is greater than 50 mSv (5 rem) dose equivalent that is a result of an administration of radioactive material or radiation from radioactive material to a pregnant individual unless the dose to the embryo/fetus was specifically approved, in advance, by the authorized user.
- B.** A licensee shall report any dose to a nursing child that is a result of an administration of radioactive material to a breast-feeding individual that:
- 1. Is greater than 50 mSv (5 rem) total effective dose equivalent; or

- 2. Has resulted in unintended permanent functional damage to an organ or a physiological system of the child, as determined by a physician.
- C.** The licensee shall notify the Agency by telephone no later than the next calendar day after discovery of a dose to the embryo, fetus, or nursing child that requires a report in subsections (A) or (B).
- D.** The licensee shall submit a written report to the Agency within 15 days after discovery of a dose to the embryo, fetus, or nursing child that requires a report in subsections (A) or (B). The written report shall include:
- 1. The licensee's name;
 - 2. The name of the prescribing physician;
 - 3. A brief description of the event;
 - 4. Why the event occurred;
 - 5. The effect, if any, on the embryo/fetus or the nursing child;
 - 6. What actions, if any, have been taken or are planned to prevent recurrence; and
 - 7. Certification that the licensee notified the pregnant individual or mother (or the mother's or child's responsible relative or guardian), and if not, why not.
- E.** The report, required in subsection (D), shall not contain the individual's or child's name or any other information that could lead to identification of the individual or child.
- F.** The licensee shall provide notification of the event to the referring physician and also notify the pregnant individual or mother, both hereafter referred to as the mother, no later than 24 hours after discovery of an event that would require reporting under subsections (A) or (B), unless the referring physician personally informs the licensee either that he or she will inform the mother or that, based on medical judgment, telling the mother would be harmful. The licensee is not required to notify the mother without first consulting with the referring physician. If the referring physician or mother cannot be reached within 24 hours, the licensee shall make the appropriate notifications as soon as possible thereafter. The licensee shall not delay any appropriate medical care for the embryo, fetus, or for the nursing child, including any necessary remedial care as a result of the event, because of any delay in notification. To meet the requirements of this subsection, the notification may be made to the mother's or child's responsible relative or guardian instead of the mother. If a verbal notification is made, the licensee shall inform the mother, or the mother's or child's responsible relative or guardian, that a written description of the event can be obtained from the licensee upon request. The licensee shall provide the written description upon request.

- G.** A licensee shall:
- 1. Make a copy of the report provided to the Agency and include with it the:
 - a. Name of the pregnant individual or the nursing child who is the subject of the event; and
 - b. Social Security number or other identification number, if one has been assigned, of the pregnant individual or the nursing child who is the subject of the event; and
 - 2. Provide the copy of the information required in subsection (G)(1) to the referring physician, if other than the licensee, no later than 15 days after the discovery of the event.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

Exhibit A. Medical Use Groups**Group 100**

Included is the use of any unsealed radioactive material for use in uptake, dilution, or excretion studies and not requiring a written directive: The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R12-1-703(C)(2)(a), or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R12-1-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R12-1-712, a physician who is an authorized user and who meets the requirements specified in R12-1-721, or R12-1-723 and R12-1-721(A)(3)(b)(vii), or an individual under the supervision of either as specified in R12-1-706; or
3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

Group 200

Included is the use of any unsealed radioactive material for use in imaging and localization not requiring a written directive. PET radiopharmaceuticals may be used if the licensee meets the requirements in R12-1-716. The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R12-1-703(C)(2)(a), or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R12-1-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R12-1-712, a physician who is an authorized user and who meets the requirements specified in R12-1-721 or R12-1-723 and R12-1-721(A)(3)(b)(vii), or an individual under the supervision of either as specified in R12-1-706; or
3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

Group 300

Included is the use of any unsealed radioactive material for medical use (radiopharmaceutical) for which a written directive is required. The radioactive material in this group shall be:

1. Obtained from a manufacturer or preparer licensed under R12-1-703(C)(2)(a) or equivalent NRC or Agreement State requirements; or
2. Obtained from a PET radioactive drug producer licensed under R12-1-703 or equivalent NRC or an Agreement State license excluding production of PET radionuclides prepared by an authorized nuclear pharmacist who meets the requirements in R12-1-712, a physician who is an

authorized user and who meets the requirements specified in R12-1-721 or R12-1-723, or an individual under the supervision of either as specified in R12-1-706; or

3. If a research protocol:
 - a. Obtained from and prepared by an Agreement State or NRC licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA; or
 - b. Prepared by the licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA.

Group 400

Included is the use of any brachytherapy source for therapeutic medical use that is manufactured in accordance with R12-1-703(C)(2)(b) and:

1. Approved for therapeutic use in the Sealed Source and Device Registry; or
2. Part of a research protocol that is approved for therapeutic use under an active Investigational Device Exemption (IDE) application accepted by the FDA, and meets the requirements of R12-1-709.

Group 500

Included is the use of any sealed source that is manufactured in accordance with R12-1-703(C)(2)(b), and is approved for diagnostic use in the Sealed Source and Device Registry.

Group 600

Included is the use of sealed sources in photon emitting remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units that are manufactured in accordance with R12-1-703(C)(2)(b) and:

1. Approved for therapeutic use in the Sealed Source and Device Registry; or
2. Part of a research protocol that is approved for therapeutic use under an active Investigational Device Exemption (IDE) application accepted by the FDA and meets the requirements of R12-1-709.

Group 1000

A licensee may use radioactive material or a radiation source approved for medical use which is not specifically addressed in R12-1-309(A)(4) if:

1. The applicant or licensee has submitted the information required by this Article; and
2. The applicant or licensee has received written approval from the Agency in a license or license amendment and uses the material in accordance with the rules and specific conditions the Agency considers necessary for the medical use of the material.

Historical Note

New Exhibit adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Section repealed; new Section made by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

ARTICLE 8. RADIATION SAFETY REQUIREMENTS FOR ANALYTICAL X-RAY OPERATIONS**R12-1-801. Scope**

The rules in this Article establish requirements for the use of analytical x-ray equipment by persons registered under R12-1-204. The provisions of this Article supplement other applicable provisions of this Chapter.

Historical Note

Former Rule Section H.1; Former Section R12-1-801

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repealed, new Section R12-1-801 adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-802. Definitions

“Analytical x-ray equipment” means devices or machines used for x-ray diffraction or x-ray induced fluorescence analysis.

“Analytical x-ray system” means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials.

“Enclosed beam x-ray system” means an analytical x-ray system constructed in such a way that access to the interior of the enclosure housing the x-ray source is precluded during operation except through bypassing of interlocks or other safety devices to perform maintenance or servicing.

“Fail-safe characteristic” means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

“Local component” means part of an analytical x-ray system and includes each area that is struck by x-rays, such as radiation source housings, port and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors and shielding, but does not include power supplies, transformers, amplifiers, readout devices, and control panels.

“Normal operating procedures” means instructions or procedures including, but not limited to, sample insertion and manipulation, equipment alignment, routine maintenance by the registrant, and data recording procedures which are related to radiation safety.

“Open beam x-ray system” means an analytical x-ray system which permits an individual to place some body part in the primary beam path during normal operation.

“Primary beam” means radiation which passes through an aperture of the source housing on a direct path from the x-ray tube.

Historical Note

Former Rule Section H.2; Former Section R12-1-802 repealed, new Section R12-1-802 adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-803. Enclosed-beam X-ray Systems

- A.** Enclosed beam x-ray systems are exempt from other equipment requirements contained in this Article provided the enclosed beam x-ray systems are designed and constructed so that radiation levels measured at 5 cm from any accessible surface of the enclosure housing the x-ray source do not exceed 5 μ Sv (0.5 mrem) in one hour.
- B.** A registrant using enclosed beam x-ray systems shall comply with applicable provisions of R12-1-804(A), R12-1-805(B), and 12 A.A.C. 1, Article 4.
- C.** A person who maintains or services analytical x-ray systems, shall:
1. Obtain permission in advance from the radiation safety officer before bypassing interlocks or other safety devices,
 2. Label equipment as “out of service” until maintenance or service is completed,
 3. Wear extremity personnel monitoring devices, and
 4. Ensure that interlocks or other safety devices are operating upon completion of maintenance or service.

Historical Note

Former Rule Section H.3; Former Section R12-1-803 repealed, new Section R12-1-803 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-803 repealed, new Section R12-1-803 adopted effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-804. Open-beam X-ray Systems

- A.** A registrant shall label open beam x-ray systems with a readily discernible sign or signs bearing the radiation symbol and the words:
1. “CAUTION -- HIGH INTENSITY X-RAY BEAM,” or a similar warning, on the x-ray source housing; and
 2. “CAUTION RADIATION -- THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED” or a similar warning, near any switch that energizes an x-ray tube if the radiation source is an x-ray tube.
- B.** A registrant shall ensure that an open beam x-ray system has all of the following warning devices:
1. X-ray tube status (On-Off) indicator in systems where the primary beam is controlled in this fashion;
 2. Shutter status (Open-Closed) indicators near each port on the radiation housing for systems which control the primary beam; and
 3. A clearly visible warning light labeled with the words “X-RAY ON,” or a similar warning located near any switch that energizes an x-ray tube, illuminated only when the tube is energized; and
 4. The warning devices in subsections (B)(1) through (3) shall be labeled so that their purpose is easily identified.
- C.** A registrant shall ensure that any apparatus utilized in beam alignment procedures is designed in such a way that excessive radiation will not strike the operator. Particular attention shall be given to viewing devices, in order to ascertain that lenses and other transparent components attenuate the beam to an acceptable level.
- D.** A registrant shall provide an interlock device which prevents entry of any portion of an individual’s body into the primary beam or causes the primary beam to be shut off upon entry into its path on all open-beam x-ray systems. A registrant may apply to the Agency for an exemption from the requirements of a safety device. An application for exemption shall include:
1. A description of the various safety devices that have been evaluated;
 2. The reason each device cannot be used; and
 3. A description of the alternative methods that will be used to minimize accidental exposure, including procedures to assure that operators and others in the area will be informed of the absence of safety devices.
- E.** A registrant shall use only systems constructed so that:
1. Each x-ray tube housing is equipped with an interlock that automatically shuts off the tube if the tube is removed from the radiation source housing or the housing is disassembled; and
 2. With all shutters closed, radiation measured at a distance of 5 centimeters from the surface of the system is not capable of producing a dose that exceeds 25 Sv (2.5 mRem) in one hour for the specified tube rating of the x-ray tube.
- F.** A registrant shall supply each x-ray generating system with a protective cabinet that limits leakage radiation measured at a distance of 5 cm (2 in) from the cabinet surface, so that the system is not capable of producing a dose equivalent that exceeds 25 μ Sv (2.5 mrem) in one hour.

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- G.** A registrant shall ensure that the local components of an analytical x-ray system are located and arranged and have sufficient shielding or access control for the specified tube rating to prevent the radiation level in any area adjacent to the local component group from exceeding the dose limits in R12-1-416.
- H.** A registrant shall perform a radiation survey of the local component group of each analytical x-ray system to demonstrate compliance with subsection (G) upon:
1. Installation,
 2. Change in configuration, or
 3. Maintenance that affects the radiation level in any area adjacent to the local component group.
- I.** A registrant shall maintain a record of each survey for three years or until the analytical x-ray system is no longer used, whichever period is shorter.

Historical Note

Former Rule Section H.4; Former Section R12-1-804 repealed, new Section R12-1-804 adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-804 renumbered as Section R12-1-805 without change, new Section R12-1-804 adopted effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-805. Administrative Responsibilities

- A.** A registrant shall designate a radiation safety officer who shall:
1. Establish and maintain operational procedures so that the radiation exposure of each worker is kept ALARA;
 2. Instruct all personnel who work with or near radiation producing machines in safety practices;
 3. Maintain a system of personnel monitoring;
 4. Establish radiation control areas, including placement of appropriate radiation warning signs or devices;
 5. Provide a radiation safety inspection of radiation producing machines on a routine basis;
 6. Review modifications to x-ray systems, including x-ray tube housing, cameras, diffractometers, shielding, and safety interlocks;
 7. Investigate and report proper authorities any case of excessive exposure to personnel and take remedial action; and,
 8. Be familiar with all applicable rules for control of ionizing radiation.
- B.** An individual shall not be permitted to operate or maintain an open beam analytical x-ray system unless the individual has received instruction in and demonstrated competence in all of the following:
1. Identification of radiation hazards associated with the use of the equipment;
 2. Significance of all radiation warning and safety devices, interlocks incorporated into the equipment, or the reasons that devices or interlocks have not been installed on certain pieces of equipment and the extra precautions required in lieu of these precautions;
 3. Proper operating procedures for the equipment;
 4. Recognition of symptoms of acute localized radiation exposure; and
 5. Proper procedure for reporting an actual or suspected exposure.
- C.** A registrant shall maintain records of instruction and competence for Agency inspection for three years from the date of course completion or demonstration.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Former Section R12-1-805 renumbered as Section R12-1-806 without change. Former Section R12-1-804 renumbered as Section R12-1-805 without change effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-806. Operating Requirements

- A.** A radiation safety officer shall establish written emergency procedures and post the procedures in a conspicuous location. The procedures shall include the telephone number of the radiation safety officer.
- B.** A registrant shall ensure that written operating procedures are available for all analytical x-ray equipment workers. An individual shall not operate analytical x-ray equipment in any manner other than that specified in the procedures unless the individual obtains the radiation safety officer's written approval.
- C.** An individual shall not bypass a safety device or interlock unless the individual has obtained Radiation Safety Officer approval. The approval shall be for a specific period of time. When a safety device or interlock has been bypassed, the Radiation Safety Officer shall place a readily discernible sign on the radiation source housing, warning the reader of the unsafe condition. A registrant shall maintain the written record of the bypass approval for three years after the approval expires.
- D.** Except as authorized in subsection (C), an individual shall not perform an operation involving removal of covers, shielding materials, or tube housings or modification of shutters, collimators, or beam stops without ascertaining that the tube is off and that it will remain off until all protective devices have been restored to the normal operating condition. An individual repairing analytical x-ray equipment shall use the main switch, rather than interlocks, for routine shutdown in preparation for repairs.
- E.** A registrant shall ensure that unused ports on radiation source housings are closed and secured against unauthorized access to the radiation source.
- F.** Finger or wrist personnel monitoring devices shall be used by:
1. Operators of open beam analytical x-ray equipment not equipped with a safety device; and
 2. Personnel performing maintenance procedures that require the presence of a primary x-ray beam when any local component is disassembled or removed.
- G.** A registrant shall ensure that each safety and warning device is tested for proper operation at intervals that do not exceed one month and maintain a record of each test for three years from the date the test is completed.

Historical Note

Former Section R12-1-805 renumbered as Section R12-1-806 without change effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-807. Surveys

- A.** To ensure that personnel exposure does not result in a dose to an individual that exceeds the dose limits specified in Article 4, a registrant shall perform a radiation survey upon:
1. Installation of the equipment and at least once each year after installation;

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2. Change in the initial arrangement, number, or type of local components in the system;
 3. Maintenance that involves disassembly or removal of a local component in the system;
 4. Maintenance that involves alignment, if alignment requires the generation of the primary x-ray beam while any local component of the system is disassembled or removed;
 5. A visual inspection of the local components in the system that reveals an abnormal condition; or
 6. Determination that personnel are being exposed to radiation in excess of established levels recorded in monitoring records for personnel during previous monitoring periods or the occupational dose limits specified in Article 4.
- B.** The radiation surveys in subsection (A) are not required if the registrant demonstrates that the local components of an analytical x-ray system are located and arranged, and have sufficient shielding or access control, to limit personnel exposure to a level that is ALARA and below the occupational dose limits in Article 4. The Agency shall determine ALARA radiation levels based on the specified x-ray tube rating.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-808. Posting

A registrant shall conspicuously post each area or room that contains analytical x-ray equipment with a sign or signs that bear the radiation symbol and the words "CAUTION – X-RAY EQUIPMENT" or words with a similar meaning.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-809. Training

A registrant shall not allow an individual to operate or maintain analytical x-ray equipment unless the individual has received training and demonstrated competence in:

1. Identifying radiation hazards associated with use of the equipment;
2. Recognizing and using radiation warning and safety devices, including interlocks that are incorporated into the equipment, and understanding why these devices are sometimes not installed;
3. Taking precautions associated with use of the equipment;
4. Recognizing symptoms of an acute localized exposure; and
5. Following proper procedure for reporting a suspected personnel exposure.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 9. PARTICLE ACCELERATORS**R12-1-901. Purpose and Scope**

- A.** This Article establishes procedures and requirements for the registration and the use of particle accelerators.
- B.** In addition to the requirements of this Article, all registrants are subject to the requirements of Articles 1, 2, 4 and 10. Registrants engaged in industrial radiographic operations are subject to the requirements of Article 11, and registrants engaged in the healing arts are subject to the requirements of Article 6 of this Chapter. Registrants using a particle accelerator for the production of radioactive material are subject to the require-

ments of Article 3, and if the radioactive material is used for medical purposes, Article 7.

Historical Note

Former Rule Section I.1; Former Section R12-1-901 repealed, new Section R12-1-901 adopted effective June 30, 1977 (Supp. 77-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1).

R12-1-902. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

"Added filter" (See Article 6)

"Arc therapy" means radiation therapy that uses electrons to treat large, superficial volumes that follow curved surfaces, as in postmastectomy patients.

"Authorized medical physicist" means an individual who meets the requirements in R12-1-711. For purposes of ensuring that personnel are adequately trained, an authorized medical physicist is a "qualified expert" as defined in Article 1.

"Beam-limiting device" (See Article 6)

"Beam-monitoring system" means a system of devices that will monitor the useful beam during irradiation and terminate irradiation when a preselected number of monitor units has been accumulated.

"Control panel" (See Article 6)

"Full beam detector" means a radiation detector of such size that the total cross section of the maximum size useful beam is intercepted.

"Gantry" means that part of a linear accelerator that supports the radiation source so that it can rotate about a horizontal axis.

"Interlock" (See Article 1)

"Isocenter" means the point of intersection of the collimator axis and the axis of rotation of the gantry.

"Monitor unit" means a unit response from the beam monitoring system from which the absorbed dose can be calculated.

"Moving beam therapy" means radiation therapy in which there is displacement of the useful beam relative to the patient. Moving beam therapy includes arc therapy, skip therapy, and rotational beam therapy.

"Rotational beam therapy" means radiation therapy that is administered to a patient from a radiation source that rotates around the patient's body or the patient is rotated while the beam is held fixed.

"Skip therapy" means rotational beam therapy that is administered in a way that maximizes the dose to an area of interest and minimizes the dose to surrounding healthy tissue.

"Spot check" (See Article 6)

"Stationary beam therapy" means radiation therapy that involves a beam from a radiation source that is aimed at the patient from different directions. The distance of the source from the isocenter remains constant irrespective of the beam direction.

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“Virtual source” means a point from which radiation appears to originate.

Historical Note

Former Rule Section I.2; Former Section R12-1-902 repealed, new Section R12-1-902 adopted effective June 30, 1977 (Supp. 77-3). Amended effective June 13, 1997 (Supp. 97-2). Section repealed by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). New Section made by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-903. General Registration Requirements

- A.** The requirements in this Section supplement the registration requirements in 12 A.A.C. 1, Article 2.
- B.** The Agency shall approve a registration application for use of a particle accelerator only if the Agency determines that:
1. The applicant is qualified by training and experience to use the accelerator for the purpose in the application submitted to the Agency under Article 2;
 2. The applicant’s proposed equipment, facilities, and operating and emergency procedures are adequate to protect public health;
 3. The applicant satisfies any other applicable requirements in this Section; and 4. The applicant has appointed a radiation safety officer.

Historical Note

Former Rule Section I.3; Former Section R12-1-903 repealed, new Section R12-1-903 adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-904. Registration of Particle Accelerators Used in the Practice of Medicine

- A.** The requirements in this Section supplement the registration requirements in R12-1-903.
- B.** An applicant that is a “medical institution,” as defined in 12 A.A.C. 1, Article 7, and performing human research shall appoint a radiation safety committee that meets the following requirements:
1. The committee shall consist of at least four individuals and shall include:
 - a. An authorized user of each type of use permitted by the registration,
 - b. The Radiation Safety Officer,
 - c. A representative of the nursing service, and
 - d. A representative of management who is neither an authorized user nor a Radiation Safety Officer, and
 - e. Any other members the registrant selects;
 2. The committee shall meet at least once in each 12-month period, unless otherwise specified by registration condition;
 3. To conduct business at least 50 percent of the membership of the committee shall be present including the Radiation Safety Officer and the management representative;
 4. The minutes of each radiation safety committee meeting shall include a reference of any discussion or documents related to the review required in R12-1-407(C);
 5. Review the radiation safety program for all sources of radiation as required in R12-1-407(C);

6. Establish a table that contains investigational levels for occupational and public dose that, when exceeded, will initiate an investigation and consideration of actions by the Radiation Safety Officer; and
 7. Establish the safety objectives of the quality management program required by subsection (E).
- C.** The applicant shall ensure that an individual designated as an authorized user is an Arizona licensed physician; approved by the radiation safety committee, if applicable; and is:
1. Certified in:
 - a. Radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology; or
 - b. Radiation oncology by the American Osteopathic Board of Radiology; or
 - c. Radiology, with specialization in radiotherapy, as a British “Fellow of the Faculty of Radiology” or “Fellow of the Royal College of Radiology”; or
 - d. Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or
 2. Engaged in the active practice of therapeutic radiology, and has completed 200 hours of instruction in basic techniques applicable to the use of a particle accelerator, 500 hours of supervised work experience, and a minimum of three years of supervised clinical experience.
 - a. To satisfy the requirement for instruction, the classroom and laboratory training shall include all of the following subjects.
 - i. Radiation physics and instrumentation,
 - ii. Radiation protection,
 - iii. Mathematics pertaining to the use and measurement of radiotherapy, and
 - iv. Radiation biology.
 - b. To satisfy the requirement for supervised work experience, training shall occur under the supervision of an authorized user at a medical institution and shall include:
 - i. Reviewing full calibration measurements and periodic spot checks,
 - ii. Preparing treatment plans and calculating treatment times,
 - iii. Using administrative controls to prevent misadministration,
 - iv. Implementing emergency procedures to be followed in the event of the abnormal operation of a particle accelerator, and
 - v. Checking and using survey meters.
 - c. To satisfy the requirement for a period of supervised clinical experience, training shall include one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user at a medical institution. The supervised clinical experience shall include:
 - i. Examining individuals and reviewing their case histories to determine their suitability for treatment, noting any limitations or contraindications;
 - ii. Selecting the proper dose and how it is to be administered;
 - iii. Calculating the therapy doses and collaborating with the authorized user in the review of patients’ or human research subjects’ progress

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and consideration of the need to modify originally prescribed doses, as warranted by patients' or human research subjects' reaction to radiation; and

- iv. Post-administration follow up and review of case histories.
 - D. With the application the applicant shall provide the name of each authorized user to the Agency so the names can be listed on the registration form, and so that the Agency can determine whether the authorized user's training and experience satisfies the requirements in subsection (C).
 - E. Each registrant shall establish and maintain a written quality management program to provide high confidence that the radiation produced by the particle accelerator will be administered as directed by an authorized user. The quality management program shall include, at minimum, the tests and checks listed in Appendix A.
 - F. Each registrant shall ensure that a particle accelerator is calibrated by an authorized medical physicist who meets the training and experience qualifications in R12-1-711.
 - G. At the time of application for registration or when a therapy program is expanded to multiple sites, each applicant or registrant shall provide the Agency with a description of the quality management program, a listing of the professional staff assigned to the facility, and the expected ratio of patient workload to staff member for programs involving multiple therapy sites. If the staffing ratio exceeds the recommended levels in Radiation Oncology in Integrated Cancer Management, Report of the Inter-Society Council for Radiation Oncology, December 1991, the applicant shall provide to the Agency for approval the justification for the larger ratio and the safety considerations that have been addressed in establishing the program. This report is incorporated by reference and available under R12-1-101. The incorporated material contains no future editions or amendments. The report is available from the American Association of Physicists in Medicine: online at <http://www.aapm.org/pubs/reports>; print copies may be purchased from Medical Physics Publishing, 4513 Vernon Blvd., Madison, WI 53705; toll free at (800) 442-5778.
- Historical Note**
- Former Rule Section I.4; Former Section R12-1-904 repealed, new Section R12-1-904 adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).
- R12-1-905. Medical Particle Accelerator Equipment, Facility and Shielding, and Spot Checks**
- A. Equipment
 - 1. Leakage radiation
 - a. X-ray leakage radiation from the source housing assembly shall not exceed 0.1 percent of the maximum dose equivalent rate of the unattenuated useful beam.
 - b. Neutron leakage radiation from the source housing assembly shall not exceed 0.5 percent of the maximum dose equivalent rate of the unattenuated useful beam.
 - c. Leakage radiation measurements made at any point 1 meter from the path of the charged particle between its point of origin and the target, window or scattering foil shall meet the requirements of subsection (A)(1)(a) and (b) when computed as a percentage of the dose rate equivalent of the unattenuated useful beam measured at 1 meter from the virtual source. Leakage radiation measurements at each point shall be averaged over an area up to but not exceeding 100 square centimeters (15.5 square inches).
 - d. The registrant shall maintain, for inspection by the Agency, records that show leakage radiation measurements for the life of the operation.
 - 2. Beam limiting devices (not to include blocks or wedges). Adjustable or interchangeable beam limiting devices shall be provided and shall transmit no more than 2 percent of the useful beam for the portion of the useful beam that is to be attenuated by the beam limiting device. The neutron component of the useful beam shall not be included in this requirement. Measurements shall be averaged over an area up to but not exceeding 100 square centimeters (15.5 square inches) at the normal treatment distance.
 - 3. Filters. The following requirements apply to systems that use a system of wedge filters, interchangeable field flattening filters, or interchangeable beam scattering filters:
 - a. Irradiation shall not be possible until a selection of a filter has been made at the treatment control panel;
 - b. An interlock system shall be provided to prevent irradiation if the filter selected is not in the correct position;
 - c. An indication of the wedge filter orientation with respect to the treatment field shall be provided at the control panel, by direct observation, or by electronic means, when wedge filters are used;
 - d. A display shall be provided at the treatment control panel showing the filter or filters in use;
 - e. Each filter that is removable from the system shall be clearly identified as to that filter's material of construction, thickness, and the nominal wedge angle for wedge filters, or a record tracing these factors for each filter shall be maintained at the system console; and
 - f. An interlock shall be provided to prevent irradiation if any filter selection operation carried out in the treatment room does not agree with the filter selection operation carried out at the treatment control panel.
 - 4. Beam monitor. Equipment installed after the effective date of this Section shall be provided with at least one radiation detector in the radiation head. This detector shall be incorporated into a primary system so that all of the following criteria are met:
 - a. Each primary system shall have a detector that is a transmission detector and a full beam detector and that is placed on the patient side of any fixed added filters other than a wedge filter;
 - b. The detectors shall be removable only with tools and shall be interlocked to prevent incorrect positioning;
 - c. Each detector shall be capable of independently monitoring and controlling the useful beam;
 - d. Each detector shall form part of a dose-monitoring system from which the absorbed dose can be calculated at a reference point in the treatment volume;
 - e. Each dose monitoring system shall have a legible display at the treatment control panel that:
 - i. Maintains a reading until intentionally reset to zero;

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- ii. Has only one scale and no scale multiplying factors in replacement equipment; and
- iii. Utilizes a design such that increasing dose is displayed by increasing numbers and is designed so that, in the event of an overdosage of radiation, the absorbed dose may be accurately determined under all nominal conditions of use or foreseeable failures;
- f. In the event of power failure, the dose monitoring information required in subsection (A)(4) displayed at the control panel at the time of failure shall be retrievable in at least one system; and
- g. Selection and display of dose monitor units;
 - i. Irradiation shall not be possible until a selection of dose monitor units has been made at the treatment control panel.
 - ii. Each primary system shall terminate irradiation when the preselected number of dose monitor units has been detected by the system.
 - iii. Each secondary system shall terminate irradiation when 110 percent of the preselected number of dose monitor units has been detected by the system.
 - iv. It shall be possible to interrupt irradiation and equipment movements at any time from the operator's position at the treatment control panel. Following an interruption, it shall be possible to restart irradiation by operator action without any reselection of operating conditions. If any change is made of a preselected value during an interruption the equipment shall go to termination condition.
 - v. It shall be possible to terminate irradiation and equipment movements, or go from an interruption condition to termination conditions at any time from the operator's position at the treatment control panel.
- 5. Beam monitoring system. All accelerator systems shall be provided with a beam monitoring system in the radiation head capable of monitoring and terminating irradiation.
 - a. Each beam monitoring system shall have a display at the treatment control panel that registers the accumulated monitor units.
 - b. The beam monitoring system shall terminate irradiation if the preselected number of monitor units has been detected by the system.
 - c. For units with a secondary beam monitoring system, the primary beam monitoring system shall terminate irradiation if the preselected number of monitor units has been detected. The secondary beam monitoring system shall terminate irradiation if the primary system fails.
 - d. In the event of a power failure, the display information required in subsection (A)(5)(a) shall be retained in at least one system following the power failure.
 - e. An interlock device shall prevent irradiation if any beam monitoring system is inoperable.
 - f. For purposes of this rule:
 - i. "Beam monitoring system" means a system of devices that will monitor the useful beam during irradiation and will terminate irradiation if a preselected number of monitor units is accumulated.
 - ii. "Monitor unit" means a unit response from the beam monitoring system from which the absorbed dose can be calculated.
- 6. Treatment beam mode selection. In equipment capable of both x-ray and electron therapy:
 - a. Irradiation shall not be possible until a selection of radiation type is made at the treatment control panel;
 - b. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations indicated at the treatment control panel;
 - c. An interlock system shall be available and in operating condition on a therapy machine, and shall be used to prevent unwanted x-ray or electron irradiation when preparing for, or performing radiation therapy procedures. The interlock system need not be available for use, if the therapy machine is only used to make an image of an inanimate object; and
 - d. The radiation type selected shall be displayed at the treatment control panel before and during irradiation.
- 7. Treatment beam energy selection. Equipment capable of generating radiation beams of different energies shall meet all of the following requirements:
 - a. Irradiation shall not be possible until a selection of energy is made at the treatment control panel;
 - b. An interlock system shall be provided to ensure that the equipment can emit only the energy of radiation that is selected;
 - c. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations indicated at the treatment control panel; and
 - d. The energy selected shall be displayed at the treatment control panel before and during irradiation.
- 8. Selection of stationary or moving beam therapy. Equipment capable of both stationary and moving beam therapy modes shall meet all of the following requirements:
 - a. Irradiation shall not be possible until a selection of stationary beam therapy or moving beam therapy is made at the treatment control panel;
 - b. An interlock system shall be provided to ensure that the equipment can operate only in the mode that is selected;
 - c. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations indicated at the treatment control panel;
 - d. An interlock system shall be provided to terminate irradiation if the movement stops during moving beam therapy;
 - e. Moving beam therapy shall be so controlled that the required relationship between the number of dose monitor units and movement is obtained; and
 - f. The mode of operation shall be displayed at the treatment control panel.
- 9. Focal spot location and beam orientation. The registrant shall determine, or obtain from the manufacturer, the location in reference to an accessible point on the radiation head of all of the following:
 - a. The x-ray target or the virtual source of x-rays,
 - b. The electron window or the scattering foil, and
 - c. All possible orientations of the useful beam.
- 10. System checking facilities. Capabilities shall be provided for checking of all safety interlock systems.

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B. Facility and shielding requirements.

1. In addition to protective barriers sufficient to ensure compliance with R12-1-907, all of the following design requirements apply:
 - a. Except for entrance doors or beam interceptors, all the required barriers shall be fixed barriers;
 - b. The treatment control panel shall be located outside the treatment room;
 - c. Windows, mirrors, operable closed-circuit television, or other equivalent viewing systems shall be provided to permit continuous observation of the patient during irradiation and shall be so located that the operator may observe the patient from the treatment control panel;
 - d. Provision shall be made for two-way oral communication between the patient and the operator at the treatment control panel;
 - e. Each point of entry into the treatment room shall be provided with warning lights that will indicate when the useful beam is "on" in a readily observable position outside of the room; and
 - f. Interlocks shall be provided and shall result in all entrance doors being closed before treatment can be initiated or continued. If the radiation beam is interrupted by any door opening, it shall be possible to restore the machine to operation only by closing the door and reinitiating exposure by manual action at the control panel.
2. An authorized medical physicist, trained and experienced in the principles of radiation protection, shall perform a radiation protection survey on all installations before human use and after any change in an installation that might produce a radiation hazard. The authorized medical physicist shall provide the survey results in writing to the individual in charge of the installation and transmit a copy of the survey results to the Agency.
3. Calibrations.
 - a. Calibration of the therapy system, including radiation output calibration, shall be performed before placing new installations into operation for the purpose of irradiation of patients. Subsequent calibrations shall be made at intervals not to exceed 12 months, and after any change that may cause the calibration of the therapy system to change.
 - b. Calibration of the radiation output of the therapy beam shall be performed with an instrument that has been calibrated using a method that is traceable to the National Institute of Standards and Technology (NIST), within the preceding two years.
 - c. Calibration of a particle accelerator shall be performed by, or under the supervision of an authorized medical physicist who meets the qualification requirements specified in R12-1-711, and a copy of the calibration report shall be maintained by the registrant for inspection by the Agency.
 - d. Calibration of the therapy beam shall include, but not necessarily be limited to, all of the following determinations:
 - i. Verification that the equipment is operating within the design specifications concerning the light localizer, the side light and back pointer alignment with the isocenter, when applicable, variation in the axis of rotation for the table, gantry and jaw system, and beam flatness and symmetry at specific depths;

- ii. The exposure rate or dose rate in air or at various depths of water for the range of field sizes used for each effective energy, and for each treatment distance used for radiation therapy;
- iii. The congruence between the radiation field and the field defined by the localizing device;
- iv. The uniformity of the radiation field and its dependency upon the direction of the useful beam; and
- v. The calibration determinations above shall be provided in sufficient detail, to allow the absorbed dose to tissue in the useful beam to be calculated to within plus or minus 5 percent.
- e. Records of calibrations shall be maintained for three years following the date the calibration was performed.
- f. A copy of the current calibration report shall be available in the therapy facility for use by the operator, and the report shall contain the following information:
 - i. The action taken by the authorized medical physicist performing the calibration if it indicates a change has occurred since the last calibration,
 - ii. A listing of the persons informed of the change in calibration results, and
 - iii. A statement as to the effect the change in calibration has had on the therapy doses prior to the current calibration finding.

C. Spot checks.

1. The spot check procedures shall be in writing and shall have been developed by an authorized medical physicist trained and experienced in performing calibrations.
2. The measurements taken during spot checks shall demonstrate the degree of consistency of the operating characteristics which can affect the radiation output of the system or the radiation dose delivered to a patient during a therapy procedure.
3. The written spot check procedure shall indicate the frequency at which tests or measurements are to be performed, not to exceed monthly.
4. The spot check procedure shall note conditions that require recalibration of the therapy system before further human irradiation.
5. Records of spot checks shall be maintained and available for inspection by the Agency for three years following the spot check measurements. Records of spot checks not performed by an authorized medical physicist shall be signed by an authorized medical physicist within 15 days of the spot check.

D. Operating procedures.

1. Only the patient shall be in the treatment room during irradiation.
2. If a patient must be held in position during treatment only, mechanical supporting or restraining devices shall be used for this purpose.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective August 8, 1986 (Supp. 86-4). New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-906. Limitations

- A. A registrant shall not permit an individual to act as:
1. A particle accelerator operator of any type unless the individual:
 - a. Has received copies of and instruction in this Article and the registrant's operating and emergency procedures,
 - b. Demonstrates an understanding of the material, and
 - c. Has demonstrated competence in the use the particle accelerator, related equipment, and survey instruments that will be employed during the operation of the particle accelerator;
 2. A medical particle accelerator operator unless the individual is certified as required in A.R.S. § 32-2811 or the operator meets the requirements in R12-1-603(B); or
 3. An industrial particle accelerator operator unless the individual has been instructed in radiation safety.
- B. A registrant shall provide either the Radiation Safety Committee or the Radiation Safety Officer with the authority to terminate operations at a particle accelerator facility if this is necessary to protect health and safety or property.
- C. If equipment is capable of both stationary and moving beam therapy, the registrant shall ensure that:
1. Irradiation is not possible unless either stationary or moving beam therapy has been selected at the control panel,
 2. An interlock is provided to ensure that the machine will operate only in the mode that has been selected,
 3. An interlock is provided that terminates irradiation if the gantry fails to move properly during moving beam therapy,
 4. A means is provided to prevent movement during stationary therapy, and
 5. The mode of operation is displayed at the control panel.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-907. Shielding and Safety Design

- A. An authorized medical physicist experienced in the principles of radiation protection and installation design shall be consulted in the design of a particle accelerator installation and called upon to perform a radiation survey when the accelerator is first capable of producing radiation. The registrant shall provide a copy of the installation radiation survey to the Agency before an Agency inspection conducted according to R12-1-914.
- B. The registrant shall shield each particle accelerator installation with the primary and secondary protective barriers necessary to comply with R12-1-408 and R12-1-416.
- C. At the time of application for registration and before treatment of the first patient, the applicant shall provide to the Agency a copy of an installation report, signed by the contractor who installed required shielding material recommended by the authorized medical physicist who performed the shielding calculations for the particle accelerator facility.
- D. As part of the annual radiation protection program review required in R12-1-407(C), the registrant shall document installed facility shielding and other radiation exposure controls, review patient workload, and note associated changes, if any, in public exposure that are the result of installed facility shielding, increased workload, and other radiation exposure controls in use at the time of the review.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsection (A) effective Aug. 8, 1986 (Supp. 86-4).

Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-908. Particle Accelerator Controls and Interlock Systems

A registrant shall ensure that:

1. Instrumentation, readouts and controls on the particle accelerator control panel are clearly identified and easily discernible;
2. All entrances into the area that contains the particle accelerator room, target room, or other high radiation area, are provided with interlocks that shut down the machine if an entrance door is opened;
3. If an interlock system connected to an entrance door that provides access to the therapy suite has been tripped, it is not possible to resume operation of the particle accelerator by resetting the interlock switch at the entrance where it had been tripped;
4. Each safety interlock is on a circuit that allows it to operate independently of all other safety interlocks;
5. If possible, the interlock system is fail-safe in design, so that any defect or component failure in the interlock system prevents operation of the particle accelerator; and
6. A scram button or other emergency power cutoff switch is located and easily identifiable in the area that contains the particle accelerator. The registrant shall ensure that the scram button prevents persons from restarting the particle accelerator at the accelerator control panel without resetting the button or switch.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-909. Warning Systems

A registrant shall ensure that:

1. High radiation areas and entrances to the high radiation areas in medical facilities are equipped with a continuously-operating warning light system that operates when, and only when, radiation is produced;
2. High radiation areas and entrances to the high radiation areas in nonmedical facilities are equipped with an easily-observable flashing or rotating warning light system that operates when, and only when, radiation is produced;
3. High radiation areas associated with nonmedical particle accelerators have an audible warning device that is activated for 15 seconds before creation of the high radiation area; and the warning device is clearly discernible in all high radiation areas and all radiation areas; and
4. High radiation areas associated with any particle accelerator are posted according to R12-1-428 and R12-1-429.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-910. Operating Procedures

- A. A registrant shall secure from use a particle accelerator when it is not being used to prevent unauthorized use.
- B. A particle accelerator operator shall use the switch on the control panel to turn the accelerator beam on and off during normal operations. The safety interlock system may be used to turn off the accelerator beam in emergencies.

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- C. A registrant shall ensure that all safety and warning systems, including interlocks, are tested for proper operation at intervals not to exceed three months, and maintain a record of each test for Agency inspection for at least three years from the date of the test.
- D. A registrant shall keep current electrical circuit diagrams of a particle accelerator and the associated interlock systems, and maintain the diagrams for inspection by the Agency.
- E. A registrant shall not bypass an interlock unless the by-pass is:
 1. Authorized in writing by the Radiation Safety Committee or Radiation Safety Office,
 2. Recorded in a permanent log with a notice of the by-pass posted at any affected interlock and at the control panel, and
 3. Terminated as soon as possible.
- F. A registrant shall maintain a copy of the current operating and emergency procedures at the particle accelerator control panel.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended subsection (D) effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-911. Radiation Surveys

- A. The registrant shall ensure that a portable survey instrument is available at all times in a particle accelerator facility.
- B. An authorized medical physicist shall:
 1. Check the operation of the portable survey instrument required in subsection (A), using a known radiation source, before each use;
 2. Perform and document a radiation protection survey when changes have been made in shielding, operation, equipment, or occupancy of adjacent areas;
 3. For particle accelerator facilities greater than 30 Mev, establish a program of radiation protection surveys that will evaluate the airborne radiation hazards, and ensure that the particulate radioactivity present in the accelerator facility will not result in personnel exposure that exceeds the limits in Article 4; and
 4. Perform radiation protection surveys, including smear surveys of the particle accelerator facility, as prescribed in the written procedures established by the Radiation Safety Officer of the particle accelerator facility and approved by the Agency at the time of application for registration.
- C. The registrant shall maintain the following records:
 1. Radiation protection surveys required in subsection (B)(2), and the associated facility description, required in R12-1-202, until the registration is terminated; and
 2. Records of the surveys required in subsections (B)(3) and (4) for three years following the measurement.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective Aug. 8, 1986 (Supp. 86-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-912. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Amended

effective Aug. 8, 1986 (Supp. 86-4). Amended effective June 13, 1997 (Supp. 97-2). Section repealed by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

R12-1-913. Misadministration

- A. For purposes of this rule "misadministration" means:
 1. A therapeutic radiation dose from a machine:
 - a. Delivered to the wrong patient;
 - b. Delivered using the wrong mode of treatment;
 - c. Delivered to the wrong treatment site; or
 - d. Delivered in one week to the correct patient, using the correct mode, to the correct therapy site, but greater than 130 percent of the prescribed weekly dose; or
 2. A therapeutic radiation dose from a machine with errors in the calibration, time of exposure, or treatment geometry that result in a calculated total treatment dose differing from the final, prescribed total treatment dose by more than 20 percent, except for treatments given in 1 to 3 fractions, in which case a difference of more than 10 percent constitutes a misadministration.
- B. Reports of therapy misadministration
 1. Within 24 hours after discovery of a misadministration, a registrant shall notify the Agency by telephone. The registrant shall also notify the referring physician of the affected patient and the patient or a responsible relative or guardian, unless the referring physician personally informs the registrant either that he or she will inform the patient, or that in his or her medical judgment, telling the patient or the patient's responsible relative or guardian would be harmful to one or the other, respectively. If the referring physician or the patient's responsible relative or guardian cannot be reached within 24 hours, the registrant shall notify them as soon as practicable. The registrant shall not delay medical care for the patient because of notification problems.
 2. Within 15 days following the verbal notification to the Agency, the registrant shall report, in writing, to the Agency and individuals notified under subsection (B)(1). The written report shall include the registrant's name, the referring physician's name, a brief description of the event, the effect on the patient, the action taken to prevent recurrence, whether the registrant informed the patient or the patient's responsible relative or guardian, and if not, why not. The report shall not include the patient's name or other information that could lead to identification of the patient.
 3. Each registrant shall maintain records of all misadministrations for Agency inspection. The records shall:
 - a. Contain the names of all individuals involved in the event, including:
 - i. The physician,
 - ii. The allied health personnel,
 - iii. The patient,
 - iv. The patient's referring physician,
 - v. The patient's identification number if one has been assigned,
 - vi. A brief description of the event,
 - vii. The effect on the patient, and
 - viii. The action taken to prevent recurrence.
 - b. Be maintained for three years beyond the termination date of the affected registration.

Historical Note

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2). Amended by final

rulemaking at 13 A.A.R. 1217, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-914. Initial Inspections of Particle Accelerators Used in the Practice of Medicine

The Agency shall inspect a particle accelerator, used in the practice of medicine, before its initial use to treat human disease.

Historical Note

New Section made by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).

Appendix A. Quality Control Program

A. Mechanical Tests

1. Patient support assembly motions
2. Gantry angle indicators
3. Optical distance indicators
4. Alignment lights
5. Congruence of radiation beam and light field
6. Accuracy of field size indicators
7. Mechanical isocenter- gantry and collimator
8. Mechanical interlocks

B. Radiation Beam Tests

1. Machine operating parameters,
2. Dose per monitor unit for x-ray and electron beams,
3. Dose per degree for moving beam therapy,
4. Radiation isocenter,
5. Flatness and symmetry,
6. Wedge transmission factors,
7. Shadow tray transmission factors,
8. Energy check on central axis,
9. Radiation output versus field size.

C. Control Panel Checks

1. Radiation "ON" condition,
2. Indicator lamp check,
3. Computer control of accelerator,
4. Interlock display,
5. Digital display,
6. Analog display,
7. Status display,
8. Reset display.

D. Facility Checks

1. Patient audio-visual communication,
2. Entrance door interlock,
3. Warning lights,
4. Emergency off button.

E. Dose Output Check

1. Each registrant shall use the services of a third party authorized medical physicist or third party TLD system to verify the accelerator's radiation output every two years.
2. If the output check is not within plus or minus 5 percent of the calibrated output, the accelerator shall be recalibrated and the discrepancy investigated.
3. Records of output checks shall be maintained for three years.

F. Patient Dosimetry Calculation Checks

1. Calculation of patient treatment times
2. Computer calculation of patient treatment times

Historical Note

New Appendix made by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

ARTICLE 10. NOTICES, INSTRUCTIONS, AND REPORTS TO RADIATION WORKERS; INSPECTIONS

R12-1-1001. Purpose and Scope

This Article establishes requirements for notices, instructions, and reports by licensees or registrants to individuals working for a licensee or registrant. This Article explains the options available to these individuals in connection with ARRA inspections of licensees or registrants regarding radiological working conditions. The rules in this Article apply to all persons who receive, possess, use, own, or transfer sources of radiation licensed or registered by the ARRA.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1002. Posting of Notices for Workers

- A.** Each licensee or registrant shall post current copies of the following documents:
1. The rules in this Chapter;
 2. The license, certificate of registration, conditions, or documents incorporated into the license or registration by reference, and any amendments to the license or registration;
 3. The operating procedures applicable to work under the license or registration;
 4. Any notice of violation involving radiological working conditions, proposed imposition of a civil penalty, or order issued under 12 A.A.C. 1, Article 12, and any response from the licensee or registrant.
- B.** If posting of a document specified in subsections (A)(1), (2) and (3) is not practicable, the licensee or registrant may post a notice which describes the document and states where it may be examined.
- C.** Form ARRA-6 (shown following R12-1-1008), "Notice to Employees" shall be posted by each licensee or registrant wherever individuals work in or frequent any portion of a restricted area.
- D.** Each licensee or registrant shall post documents, notices, or forms, as required by this Section, so that they are conspicuous and appear in a sufficient number of places to permit individuals engaged in work under the license or registration to observe them on the way to or from any particular work location to which the document applies and shall replace any document if it is defaced or altered.
- E.** Agency documents posted as required in subsection (A)(4) shall be posted within two working days after receipt of the documents from the Agency; the licensee's or registrant's response, if any, shall be posted within two working days after dispatch from the licensee or registrant. The documents shall remain posted for a minimum of five working days or until action correcting the violation has been completed, whichever is later.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1003. Instructions for Workers

- A.** A licensee or registrant shall ensure that each individual who, in the course of employment, is likely to receive in a year an occupational dose in excess of 1 mSv (100 mrem), receives instruction in all of the following subjects:
1. Storage, transfer, or use of radiation and radioactive material;

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2. Health protection problems associated with exposure to radiation or radioactive material, precautions or procedures to minimize exposure, and purposes and functions of protective devices;
 3. Applicable provisions in Agency rules, licenses, and registrations that protect of personnel from exposure to radiation or radioactive material, with an emphasis on the duties of workers;
 4. The duty to promptly report to the licensee or registrant any condition that may lead to or cause a violation of a provision in an Agency rule, license, or registration or unnecessary exposure to radiation or radioactive material;
 5. Correct response to warnings in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive material; and
 6. Radiation exposure reports that a worker may request according to R12-1-1004.
- B.** In determining whether subsection (A) applies to an individual, a licensee or registrant shall take into consideration assigned activities during normal and abnormal situations that involve exposure to radiation or radioactive material and could reasonably be expected to occur during the life of a facility. The licensee or registrant shall provide instruction that is commensurate with potential radiological health protection problems present in the work place.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).

R12-1-1004. Notifications and Reports to Individuals

- A.** A licensee or registrant shall report radiation exposure data for an individual and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body to the individual as specified in this Section. The information reported shall include data and results obtained under Agency rules, orders, or license conditions, as shown in records maintained by the licensee or registrant. Each notification and report shall be in writing; include appropriate identifying data, such as the name of the licensee or registrant, the name of the individual, and the individual's Social Security number; include the individual's exposure information; and contain the following statement:
- "This report is furnished to you under the provisions of 12 A.A.C. 1. You should preserve this report for future reference."
- B.** Each licensee or registrant shall make dose information available to workers as shown in records maintained by the licensee or registrant under the provisions of Article 4. Each licensee or registrant shall provide annual notification of exposure to radiation or radioactive material for each worker, as shown in records maintained by the licensee or registrant under R12-1-419(E) if:
1. The individual's occupational dose exceeds 1 mSv (100 mrem) TEDE or 1 mSv (100 mrem) to any individual organ or tissue; or
 2. The individual requests his or her annual dose report.
- C.** At the request of a worker formerly engaged in work controlled by the licensee or the registrant, each licensee or registrant shall furnish to the worker a report of the worker's exposure to radiation or radioactive material. The report shall be furnished within 30 days from the time the request is made, or within 30 days after the exposure of the individual has been determined by the licensee or registrant, whichever is later; the

report shall cover, within the period of time specified in the request, each calendar quarter in which the worker's activities involved exposure to radiation from radioactive material licensed by, or radiation machines registered with, the Agency; and the report shall include the dates and locations of work under the license or registration in which the worker participated during this period.

- D.** Reports to individuals of their exposure to radiation shall be made according to R12-1-446.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3) Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 20 A.A.R. 324, effective March 8, 2014 (Supp. 14-1).

R12-1-1005. Licensee, Registrant, and Worker Representation During Agency Inspection

- A.** As a condition of licensure or registration, each licensee or registrant shall afford to the Agency, at all reasonable times and without undue delay, an opportunity to inspect materials, machines, activities, facilities, premises, and records.
- B.** During an inspection, the licensee or registrant shall permit Agency inspectors to consult privately with workers as specified in Section R12-1-1006. The licensee or registrant may accompany Agency inspectors during other phases of an inspection.
- C.** A worker authorized to consult with an Agency inspector under R12-1-1006 may authorize another individual to represent the worker's interests during the Agency inspection. The licensee or registrant shall notify the inspectors of the worker's authorization and give the worker's representative an opportunity to accompany the inspectors during the inspection of physical working conditions.
- D.** Each worker's representative shall be routinely engaged in work under control of the licensee or registrant or shall have received instructions under R12-1-1003.
- E.** Different representatives of licensees or registrants and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the inspection. However, only one worker's representative at a time may accompany the inspectors.
- F.** With the approval of the licensee or registrant and the worker's representative an individual who is not routinely engaged in work under control of the licensee or registrant, for example, a consultant to the licensee or registrant or to the worker's representative, shall be afforded the opportunity to accompany Agency inspectors during the inspection of physical working conditions.
- G.** Notwithstanding the other provisions of this Section, Agency inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information the worker's representative for that area shall be an individual previously authorized by the licensee or registrant to enter that area. With regard to areas containing information classified by an agency of the U.S. Government in the interest of national security, any individual who accompanies an inspector may have access to such information only if authorized by the classifying agency.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

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R12-1-1006. Consultation with Workers During Inspections

- A. A licensee or registrant shall afford Agency inspectors talking to a licensee or registrant representative the opportunity to consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of Agency rules, licenses, and registrations to the extent the inspectors deem consultation necessary for conducting an effective and thorough inspection.
- B. During the course of an inspection, any worker may privately bring to the attention of the inspectors, either orally or in writing, any past or present condition which the worker has reason to believe may have contributed to or caused any violation of the Act, these rules, or a license or registration condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material or a registered radiation machine under the licensee's or registrant's control. If this notification is in writing, the worker shall comply with the requirements of R12-1-1007(A).
- C. The provisions of R12-1-1006(B) shall not be interpreted as authorization to disregard instructions required by R12-1-1003.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1007. Inspection Requests by Workers

- A. Any worker or representative of workers who believes that a violation of the Act, these rules, license, or registration conditions exists, or has occurred with regard to radiological working conditions in which the worker is engaged, may request an inspection of the facility by the Agency. Any request shall be in writing, addressed to the Director, set forth the specific grounds for the request, and be signed by the worker or representative of the workers. The Agency shall provide a copy to the licensee or registrant no later than at the time of inspection except that, upon the request of the worker, the Agency shall protect the worker's name and the name of individuals referred

to in the request to the extent authorized by law, except for good cause shown.

- B. If, upon receipt of a request for inspection, the Agency's Director determines that there are reasonable grounds to believe that the alleged violation exists or has occurred, the Director shall initiate an inspection as soon as practicable, to determine if the alleged violation exists or has occurred. Inspections performed under this subsection need not be limited to matters referred to in the complaint.
- C. A licensee or registrant shall not discharge or in any manner discriminate against any worker because the worker has filed any complaint or caused to be instituted any proceeding under these rules or has testified or is about to testify in the instituted proceeding or because the worker exercises on behalf of the worker or others, any option afforded by this Article.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1008. Inspection not Warranted; Review

If the Agency determines, with respect to a complaint under R12-1-1007, that an inspection is not warranted or there are no reasonable grounds to believe that a violation exists or has occurred, the Agency shall notify the complainant in writing of the determination. The complainant may obtain review of the determination by submitting a written request for hearing to the Agency. The Agency shall provide for a hearing before the Radiation Regulatory Hearing Board under 12 A.A.C. 1, Article 12 and A.R.S. Title 41, Chapter 6, Article 10.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Amended effective February 25, 1985 (Supp. 85-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). R12-1-1008 updated to reflect a corrected Arizona Revised Statute article number (Supp. 07-1).

Exhibit A. Form ARRA-6 (2012) Notice to Employees
ARRA-6 (2012) ARIZONA RADIATION REGULATORY AGENCY

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION; NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS; INSPECTIONS

In Article 4 of the Arizona Radiation Regulatory Agency (ARRA) rules for the Control of Radiation, the Arizona Radiation Regulatory Agency has established standards for your protection against radiation hazards. In Article 10 of the rules for the Control of Radiation, the Arizona Radiation Regulatory Agency has established certain provisions for the options of workers engaged in work under an ARRA license or registration.

YOUR EMPLOYER'S RESPONSIBILITY

Your employer is required to -

1. Apply these rules to work involving sources of radiation.
2. Post or otherwise make available to you a copy of the Arizona Radiation Regulatory Agency rules, licenses, and operating procedures which apply to work you are engaged in, and explain their provisions to you.
3. Post notice of violation involving radiological working conditions, proposed imposition of civil penalties, and orders.

YOUR RESPONSIBILITY AS A WORKER

You should familiarize yourself with those provisions of the Arizona Radiation Regulatory Agency rules and the operating procedures which apply to the work you are engaged in. You should observe their provisions for your own protection and protection of your co-workers.

WHAT IS COVERED BY THESE RULES

1. Limits on exposure to radiation and radioactive material in restricted and unrestricted areas;
2. Measures to be taken after accidental exposure;
3. Personnel monitoring, surveys, and equipment;
4. Caution signs, labels, and safety interlock equipment;
5. Exposure records and reports;
6. Options for workers regarding ARRA inspections; and
7. Related matters.

REPORTS ON YOUR RADIATION EXPOSURE HISTORY

1. The Arizona Radiation Regulatory Agency rules require that your employer give you a written report if you receive an exposure in excess of any applicable limit set forth in the rules or in the license. The basic limits for

exposure to employees are set forth in Article 4 of the rules. These Sections specify limits on exposure to radiation and exposure to concentrations of radioactive material in air and water.

2. If you work where personnel monitoring is required, and if you request information on your radiation exposures,
 - a. Your employer must give you a written report, upon termination of your employment, of your radiation exposures; and
 - b. Your employer must advise you annually of your exposure to radiation.

INSPECTIONS

All licensed or registered activities are subject to inspection by representatives of the Arizona Radiation Regulatory Agency. In addition, any worker or representative of workers who believes that there is a violation of the regulations issued thereunder, or the terms of the employer's license or rules with regard to radiological working conditions in which the worker is engaged, may request an inspection by sending a notice of the alleged violation to the Arizona Radiation Regulatory Agency. The request must set forth the specific grounds for the notice and must be signed by the worker on his own behalf or as a representative of the workers. During inspections, ARRA inspectors may confer privately with workers, and any worker may bring to the attention of the inspectors any past or present condition which he believes contributed to or caused any violation as described above.

INQUIRIES

Inquiries dealing with the matters outlined above can be sent to the:
ARIZONA RADIATION REGULATORY AGENCY

POSTING REQUIREMENT

IN ACCORDANCE WITH A.A.C. R12-1-1002, COPIES OF THIS NOTICE SHALL BE POSTED IN SUCH A MANNER TO PERMIT EMPLOYEES WORKING IN OR FREQUENTING ANY PORTION OF A RESTRICTED AREA, USED FOR ACTIVITIES LICENSED OR REGISTERED PURSUANT TO ARTICLE 2 OR ARTICLE 3 OF THE AGENCY'S RULES, TO OBSERVE A COPY OR COPIES ON THE WAY TO OR FROM THEIR WORK AREA.

Historical Note

Exhibit A amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

ARTICLE 11. INDUSTRIAL USES OF X-RAYS, NOT INCLUDING ANALYTICAL X-RAY SYSTEMS

R12-1-1101. Repealed

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 97-2).

R12-1-1102. Definitions

"Access point" means any door or cover that is designed to be removed or opened for maintenance or service purposes, opened using tools, and used to provide access to the interior of a cabinet x-ray unit.

"Annual refresher safety training" means a review provided by the registrant for its employees on radiation safety aspects of industrial radiography. The review shall include, as applicable, the results of internal inspections, new procedures or equipment, new or revised statutes or rules, accidents, or errors that have occurred, and provide opportunities for employees to ask safety questions.

"Aperture" means any opening in the outside surface of a cabinet x-ray unit, other than a port, which remains open during generation of x-radiation.

"Door" means any barrier that is designed to be movable or opened for routine operation purposes, rather than opened

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using tools, and used to provide access to the interior of the cabinet x-ray unit.

“Ground fault” means an accidental electrical grounding of an electrical conductor.

“Hands-on experience” means the accumulation of knowledge or skill in any area relevant to radiography.

“Port” means any opening in the outside surface of a cabinet x-ray unit that is designed to remain open, during generation of x-rays, for conveying material that is being irradiated into and out of the cabinet, or for partial insertion of an object for irradiation if the dimensions of the object do not permit complete insertion into the cabinet x-ray unit.

“Practical examination” means a demonstration, through practical application of safety rules and principles of industrial radiography, which includes use of all radiography equipment and tests knowledge of radiography procedures.

“Radiographic operations” means all activities associated with use of a radiographic x-ray system. This includes performing surveys to confirm the adequacy of boundaries, setting up equipment, and conducting any activity inside restricted area boundaries.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 9702). New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

R12-1-1103. Repealed**Historical Note**

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 97-2).

R12-1-1104. Registration Requirements

- A. The Agency shall review an application for registration of a radiation machine for use in industrial radiography and approve the registration if an applicant meets all of the following requirements:
1. The applicant satisfies the general requirements in Article 2 and any special requirements contained in this Article,
 2. The applicant submits a program for training radiographer’s assistants that complies with R12-1-1146, and
 3. The applicant submits procedures for verifying and documenting the certification status of each radiographer and for ensuring that the certification remains valid.
- B. An applicant shall submit written operating and emergency procedures, as prescribed in R12-1-1128.
- C. An applicant shall submit a description of a program for review of job performance of each radiographer and radiographer’s assistant at intervals that do not exceed six months, as prescribed in R12-1-1146(E).
- D. An applicant shall submit a description of the applicant’s overall organizational structure as it applies to radiation safety responsibilities in industrial radiography, including specified delegation of authority and responsibility.
- E. An applicant shall submit and list the qualifications of each individual designated as an RSO under R12-1-1120 and indicate which designee is responsible for ensuring that the registrant’s radiation safety program is implemented.
- F. If an applicant intends to perform “in-house” calibrations of survey instruments, the applicant shall describe each calibration method to be used, the relevant experience of each person who will perform a calibration, and procedures to ensure that all calibrations are performed according to the procedures prescribed in R12-1-1108.
- G. An applicant shall identify and describe the location of all field stations and permanent radiographic installations.

- H. An applicant shall identify each location where records required by this Chapter will be maintained.

Historical Note

Adopted effective June 30, 1977 (Supp. 77-3). Repealed effective June 13, 1997 (Supp. 97-2). New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1105. Reserved**R12-1-1106. Equipment Performance**

A registrant shall ensure that each x-ray machine has a lock or other security system designed to prevent unauthorized use or accidental production of radiation and is secured against unauthorized use at all times, except when under the direct surveillance of a radiographer or radiographer’s assistant.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1107. Reserved**R12-1-1108. Radiation Survey Instruments**

- A. A registrant shall maintain at least two calibrated and operable radiation survey instruments at each location where sources of radiation are present to make radiation surveys required by this Article and Article 4 of this Chapter. Instrumentation required by this Section shall be capable of measuring a range from 0.02 millisieverts (2 millirem) per hour through 0.01 sievert (1 rem) per hour.
- B. A registrant shall ensure that each radiation survey instrument required under subsection (A) is calibrated:
1. At intervals that do not exceed six months, and after instrument servicing, except for battery changes;
 2. For linear scale instruments, at two points located approximately one-third and two-thirds of full-scale on each scale; for logarithmic scale instruments, at mid-range of each decade, and at two points of at least one decade; and for digital instruments, at 3 points between 0.02 and 10 millisieverts (2 and 1000 millirem) per hour; and
 3. So that an accuracy within plus or minus 20% of the calibration source can be demonstrated at each point checked.
- C. A registrant shall make a record each time a radiation survey instrument is calibrated, and maintain each record for three years after it is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1109. Reserved**R12-1-1110. Quarterly Inventory**

- A. A registrant shall conduct a quarterly physical inventory to account for all x-ray machines received and possessed under the registration.
- B. A registrant shall maintain a record of the quarterly inventory required under subsection (A) for three years after it is made.
- C. The record required by subsection (B) shall include the date of the inventory, name of the individual who conducted the inventory, location of each x-ray machine, and manufacturer, model, and serial number of each x-ray machine.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

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R12-1-1111. Reserved**R12-1-1112. Utilization Logs**

- A. A registrant shall maintain for each x-ray machine a utilization log that provides all of the following information:
1. A description, including the make, model, and serial number of each x-ray machine;
 2. The identity and signature of the radiographer using the machine; and
 3. The plant or site where the machine is used and dates of use, including each date when the machine is removed from or returned to storage.
- B. A registrant shall retain a log required by subsection (A) for three years after the log is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1113. Reserved**R12-1-1114. Inspection and Maintenance of Radiation Machines, Survey Instruments, and Associated Equipment**

- A. A registrant shall perform visual and operability checks on survey instruments and radiation machines before use on each day the equipment is to be used to ensure that the equipment is in good working condition and required labeling is present. Survey instrument operability checks shall be performed using check sources or other authorized means. If equipment problems are found, the registrant shall remove the equipment from service until it is repaired.
- B. A registrant shall have written inspection and maintenance procedures for radiation machines and survey instruments that require inspection and maintenance, at intervals that do not exceed three months or before first use of the equipment and to ensure the proper functioning of components important to safety. Replacement components shall meet design specifications. If equipment problems are discovered, the registrant shall remove the equipment from service until the equipment is repaired.
- C. A registrant shall maintain records of equipment problems found in daily checks and quarterly inspections and retain each record for three years after it is made. The record shall include the date of the check or inspection, name of the inspector, equipment involved, any problems found, and any repair or needed maintenance performed.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1115. Reserved**R12-1-1116. Surveillance**

During each radiographic operation a radiographer, or the radiographer's assistant as permitted by R12-1-1118, shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, except at permanent radiographic installations where all entrances are locked and the registrant is in compliance with R12-1-1136.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1117. Reserved**R12-1-1118. Industrial Radiographic Operations**

- A. If industrial radiography is performed at a location other than a permanent radiographic installation, a registrant shall ensure that the radiographer is accompanied by at least one other radiographer or radiographer's assistant, qualified under R12-

1-1146. The additional radiographer or radiographer's assistant shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. The registrant shall not allow industrial radiography if only one qualified individual is present.

- B. A registrant shall ensure that each industrial radiographic operation is conducted at a location of use authorized on the registration of a permanent radiographic installation, unless another permanent location is specifically authorized by the Agency.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1119. Reserved**R12-1-1120. Radiation Safety Officer (RSO)**

- A. A registrant shall have a radiation safety officer (RSO) who is responsible for implementing procedures and regulatory requirements in the daily operation of the radiation safety program.
- B. A registrant shall ensure that the RSO has satisfied the following minimum requirements:
1. The training and testing requirements in R12-1-1146;
 2. Two thousand hours of hands-on experience as a qualified radiographer for an industrial radiographic operation; and
 3. Formal training in the establishment and maintenance of a radiation safety program.
- C. A registrant may use an individual in the position of RSO who does not have the training and experience required in subsection (B), if the registrant provides the Agency with a description of the individual's training and experience in the field of ionizing radiation and training with respect to the establishment and maintenance of a radiation safety protection program.
- D. The specific duties and authorities of the RSO include, but are not limited to:
1. Establishing and overseeing operating, emergency, and ALARA procedures as required in Article 4 of this Chapter, and reviewing the procedures every year to ensure that they conform to current Agency rules and registration conditions;
 2. Overseeing and approving all phases of the training program for radiographic personnel, ensuring that appropriate and effective radiation protection practices are taught;
 3. Overseeing radiation surveys and associated documentation to ensure that the surveys are performed in accordance with the rules and taking corrective measures if levels of radiation exceed established action limits;
 4. Overseeing the personnel monitoring program to ensure that monitoring devices are calibrated and used properly by occupationally exposed personnel and ensuring that records are kept of the monitoring results and timely notifications are made as required in R12-1-444; and
 5. Overseeing operations to ensure that they are conducted safely and instituting corrective actions, which may include ceasing operations if necessary.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1121. Reserved**R12-1-1122. Form of Records**

A registrant shall maintain records in accordance with R12-1-405.

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Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1123. Reserved**R12-1-1124. Reserved****R12-1-1125. Reserved****R12-1-1126. Posting**

A registrant shall post any area in which industrial radiography is being performed as required by R12-1-429. Exceptions listed in R12-1-430 do not apply to industrial radiographic operations.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1127. Reserved**R12-1-1128. Operating and Emergency Procedures**

- A. A registrant shall have operating and emergency procedures that include, at minimum, instructions in the following, as applicable:
1. Use of radiation machines, so that persons are not exposed to radiation that exceeds the limits in Article 4 of this Chapter;
 2. Methods and occasions for conducting radiation surveys;
 3. Methods for controlling access to radiographic areas;
 4. Methods and occasions for locking and securing a radiation machine;
 5. Personnel monitoring and associated equipment;
 6. Inspection, maintenance, and operability checks of a radiation machine and survey instruments;
 7. Actions to be taken immediately by radiography personnel if a pocket dosimeter is found to be off-scale or an alarm rate meter sounds an alarm;
 8. Procedures for identifying and reporting defects and non-compliance, as required by R12-1-448;
 9. The procedure for notifying the RSO and the Agency in the event of an accident;
 10. Minimizing exposure of persons in the event of an accident, and
 11. Maintenance of records.
- B. The registrant shall maintain copies of current operating and emergency procedures until the Agency terminates the registration. Superseded procedures shall be maintained for three years after a change is made. Additionally, records shall be maintained in accordance with R12-1-1138.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1129. Reserved**R12-1-1130. Personnel Monitoring**

- A. An individual shall not act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, the individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm rate meter, and either a film badge, a TLD, or an optically stimulated luminescence (OSL) dosimeter. At permanent radiography installations where other required alarm or warning devices are in routine use, an alarm rate meter is not required.
1. A registrant shall provide pocket dosimeters that have a range from zero to 2 millisieverts (200 millirems) and ensure that the dosimeters are recharged at the start of each shift. Electronic personnel dosimeters are permitted in place of ion-chamber pocket dosimeters.

2. The registrant shall assign a film badge, TLD, or OSL dosimeter to one individual, who shall wear the assigned equipment.
 3. The registrant shall replace film badges at least monthly and replace TLDs or OSL dosimeters at least quarterly.
 4. After replacement, the registrant shall ensure that each film badge or TLD is processed as soon as possible.
- B. A radiographer or radiographer's assistant shall record exposures noted from direct reading dosimeters, such as pocket dosimeters or electronic personnel dosimeters, at the beginning and end of each shift.
- C. A registrant shall check each pocket dosimeter or electronic personnel dosimeter at least yearly for correct response to radiation, and discontinue use of a dosimeter if it is not accurate within plus or minus 20% of the true radiation exposure.
- D. If an individual's pocket dosimeter has an off-scale reading, or the electronic personnel dosimeter reads greater than 2 millisieverts (200 millirems), and radiation exposure cannot be ruled out as the cause, a registrant shall send the individual's film badge, TLD, or OSL dosimeter for processing within 24 hours. The registrant shall not allow the individual to work with a radiation machine until the individual's radiation exposure is determined. Using the information from the badge or dosimeter, the RSO or the RSO's designee shall calculate the affected individual's cumulative radiation exposure, as prescribed in Article 4 of this Chapter and include the results in records maintained in accordance with subsection (G).
- E. If an individual's monitoring device is lost or damaged, the individual shall cease work immediately until the registrant provides a replacement film badge, TLD, or OSL dosimeter and the RSO or the RSO's designee calculates the exposure for the time period from issuance to discovery of a lost or damaged film badge, TLD, or OSL dosimeter. The registrant shall include the calculated exposure and the time period for which the film badge, TLD, or OSL dosimeter was lost or damaged in the records maintained in accordance with subsection (G).
- F. For each alarm rate meter a registrant shall ensure that:
1. At the start of a shift each individual with an alarm rate meter checks that the alarm functions (sounds) before using the device;
 2. Each device is set to give an alarm signal at a preset dose rate of 5 mSv/hr (500 mrem/hr) with an accuracy of plus or minus 20% of the true radiation dose rate;
 3. A special means is necessary to change the preset alarm function on the device; and
 4. Each device is calibrated at periods that do not to exceed 12 months for correct response to radiation
- G. Each registrant shall maintain the following personnel monitoring records:
1. Each dosimeter reading and the yearly operability check required by subsections (B) and (C) for three years after each record is made;
 2. A record of each alarm rate meter calibration for three years after the record is made;
 3. Any report received from the film badge, TLD, or OSL processor. The registrant shall maintain these records until the Agency terminates the registration; and
 4. Any estimation of an exposure evidenced by an off-scale personnel direct-reading dosimeter or a lost or damaged film badge, TLD, or OSL dosimeter. The records shall be maintained until the Agency terminates the registration.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1131. Reserved**R12-1-1132. Supervision of a Radiographer's Assistant**

If a radiographer's assistant uses a radiation machine or conducts a radiation survey required by R12-1-1134(B), the registrant shall ensure that the assistant is under the personal supervision of a radiographer. For purposes of this Section "personal supervision" means:

1. The radiographer is physically present at the site where the radiation machine is being used;
2. The radiographer is available to give immediate assistance if required; and
3. The radiographer is able to observe directly the assistant's performance.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1133. Reserved**R12-1-1134. Radiation Surveys**

- A. A registrant shall conduct surveys with a calibrated and operable radiation survey instrument that meets the requirements of R12-1-1108.
- B. A registrant shall conduct a survey of a radiographic machine any time the machine is placed in storage to ensure that the machine will not expose personnel to radiation.
- C. A registrant shall maintain a record of each exposure survey conducted before a machine is placed in storage under subsection (B), if that survey is the last one performed during the workday. Each record shall be maintained for three years after it is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1135. Reserved**R12-1-1136. Permanent Radiographic Installations**

- A. If a registrant maintains a permanent radiographic installation that does not fall within the definition of "enclosed radiography" in R12-1-102, the registrant shall ensure that each entrance used for personnel access to the high radiation area has either:
 1. An entrance control device of the type described in R12-1-420(A)(1), which reduces the radiation level upon entry into the area, or
 2. Both conspicuous visible and audible alarm signals to warn of the presence of radiation. The registrant shall ensure that the visible signal is actuated by radiation if the x-ray tube is energized and the audible signal is actuated if a person attempts to enter the installation while the x-ray tube is energized.
- B. A registrant shall test the alarm system for proper operation with a radiation source each day before the installation is used for radiographic operations. The test shall include a check of both the visible and audible signals. The registrant shall test each device referenced in subsection (A)(1) monthly. If an entrance control device or alarm signal is operating improperly, the registrant shall immediately label the device or signal as "defective" and repair the device or signal within seven calendar days. The registrant may continue to use the facility during this seven-day period, if the registrant implements continuous surveillance requirements of R12-1-1116 and uses an alarm rate meter.
- C. A registrant shall maintain each record of alarm system and entrance control device tests for three years after the record is made.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1137. Reserved**R12-1-1138. Location of Documents and Records**

- A. A registrant shall maintain a copy of each record required by this Article and other applicable Articles of this Chapter at the location specified on the registration application.
- B. A registrant shall maintain a copy of the following at each field station and temporary job site:
 1. The registration that authorizes use of a radiation machines;
 2. A copy of Articles 4, 10, and 11 of this Chapter;
 3. Utilization logs for each radiation machine dispatched from that location, as required by R12-1-1112;
 4. Records of equipment problems identified in daily checks of equipment, as required by R12-1-1114;
 5. Records of alarm system and entrance control device checks, as required by R12-1-1136;
 6. Records of direct-reading dosimeters such as pocket dosimeters and electronic personnel dosimeters, as required by R12-1-1130;
 7. Operating and emergency procedures, as required by R12-1-1128;
 8. A report on the most recent calibration of the radiation survey instruments in use at the site, as required by R12-1-1108;
 9. A report on the most recent calibration of each alarm rate meter and operability check of each pocket dosimeter, or electronic personnel dosimeter, as required by R12-1-1130;
 10. Most recent survey record, as required by R12-1-1134; and
 11. If a registrant is operating in the state under R12-1-207, a copy of the out-of-state machine registration and a written authorization from the Agency to operate in the state.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1139. Reserved**R12-1-1140. Enclosed Radiography**

- A. The Agency has determined that any certified or certifiable cabinet x-ray system, as defined in Article 1, is exempt from the requirements of Article 11, provided that both of the following conditions are met:
 1. The registrant makes, or causes to be made, an evaluation of each certified and certifiable cabinet x-ray system, at intervals that do not exceed 12 months, to determine whether the system conforms to the standards for certified and certifiable cabinet x-ray systems defined in Article 1. Records of each evaluation shall be maintained for three years from the date the record is created; and
 2. The registrant performs a physical radiation survey with a survey instrument calibrated within the preceding 12 months and designed for the energy range and levels of radiation that will be assessed.
- B. A registrant with a cabinet x-ray system that is not exempt under subsection (A) shall comply with the recordkeeping requirements of this Article and the following special requirements. The registrant shall:
 1. Ensure that radiation levels measured at 5 centimeters (2 inches) from any accessible exterior surface of the enclosure do not exceed 50 microsievert (0.5 milliroentgen) in

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- one hour for any combination of technical factors (i.e., mA, kVp);
2. Ensure that access to the interior of the enclosure is possible only through interlocked doors or panels that prevent production of radiation unless all interlocked doors or panels are securely closed. The registrant shall ensure that opening a door or panel results in immediate termination of radiation production and subsequent reactivation of the x-ray tube is only possible at the control panel;
 3. Provide visible warning signals, activated only during production of radiation, at the control panel and at each access point to the interior of the enclosure;
 4. Before using an x-ray system make, or cause to be made, an initial evaluation of the x-ray system to determine compliance with this Article, and subsequently evaluate the x-ray system at intervals that do not exceed three months. The registrant shall maintain a record of each evaluation for two years, and
 5. Using instrumentation that complies with R12-1-1108, perform a physical radiation survey to satisfy the requirements of subsection (B)(4).
- C.** A registrant with a shielded room x-ray systems shall comply with the recordkeeping requirements of this Article and the following special requirements. The registrant shall:
1. Shield each x-ray room so that every location on the exterior meets the requirements for an "unrestricted area" as specified in R12-1-416;
 2. Provide access to the interior of a shielded x-ray room only through doors or panels that are interlocked. The registrant shall ensure that radiation production is possible only when all interlocked doors and panels are securely closed, opening of any interlocked door or panel results in immediate termination of radiation production; and subsequent reactivation of the x-ray tube is only possible at the control panel;
 3. Provide each access point with two interlocks, each on a separate circuit, so that failure of one interlock will not affect the performance of the other interlock;
 4. Provide visible warning signals, activated only during production of radiation at the control panel and each access point to the shielded room;
 5. Make, or cause to be made, an initial evaluation of each shielded room x-ray system to determine compliance with this Article, and subsequently evaluate the x-ray system at intervals that do not exceed three months. The registrant shall maintain a record of each evaluation for two years;
 6. Perform radiation surveys to determine exposure with an instrument that meets the requirements of R12-1-1108;
 7. Inspect electrical interlocks and warning devices for correct operation before each use, and maintain a record of each inspection for two years;
 8. Not permit an individual to operate an x-ray machine for shielded room radiography unless the individual has received a copy of, and instruction in, the operating procedures and demonstrated competence in the safe use of the equipment;
 9. Ensure that an individual does not occupy the interior of any shielded room x-ray system during production of radiation;
 10. Provide personnel monitoring devices that meet the requirements of R12-1-1130 to each shielded room x-ray machine operator, and require that each operator use the devices;
 11. Maintain records of:
 - a. Quarterly inventories for mobile systems, as prescribed in R12-1-1110; and
 - b. Utilization logs for all systems, as prescribed in R12-1-1112; and
 12. Maintain records for three years from the date of the quarterly inventory or utilization log.
- D.** A registrant shall connect an enclosed radiography machine to the electrical system in a manner that will prevent a ground fault from generating x-radiation.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

R12-1-1141. Reserved**R12-1-1142. Baggage and Package Inspection Systems**

- A.** For x-ray systems designed to screen carry-on baggage or packages at airlines, railroads, bus terminals, package inspection facilities, or similar facilities, a registrant shall ensure the x-ray system has an operator present at the control area in a position that permits surveillance of the ports and doors during generation of x-radiation to prevent exposure to passengers and other members of the public.
- B.** For an exposure or preset succession of exposures of one-half second or greater duration, a registrant shall use a system that enables the operator to terminate the exposure or preset succession of exposures at any time.
- C.** For an exposure or preset succession of exposures of less than one-half second duration, a registrant shall use a system that allows the operator to complete the exposure in progress, but prevent additional exposures.
- D.** A registrant shall operate a baggage or package inspection system according to the manufacturer's instructions.
- E.** A registrant shall not disconnect or otherwise tamper with the safety systems of a baggage or package inspection system, except for maintenance purposes.
- F.** In addition to the requirements in this Section, a registrant using a baggage or package inspection system shall meet the requirements in R12-1-1140(A), (B), and (D).

Historical Note

New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1143. Reserved**R12-1-1144. Reserved****R12-1-1145. Reserved****R12-1-1146. Training**

- A.** A registrant shall not allow an individual to act as a radiographer until the individual has received training in the subjects in subsection (G), has participated in a minimum of two months of on-the-job training, and is certified through a radiographer certification program by a independent certifying organization in accordance with the criteria specified in Appendix A.
1. A registrant shall provide the Agency with proof of an individual's certification upon request.
 2. A registrant shall maintain proof of an individual's certification at the job site where the individual is performing field radiography.
 3. A registrant that employs a certified radiographer in Arizona shall ensure that:
 - a. The radiographer has obtained initial certification or recertification within the last five years; and
 - b. An uncertified radiographer works only as a radiographer's assistant until certified.
 4. A radiographer shall recertify every five years by:

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- a. Taking an approved radiography certification examination in accordance with this subsection; or
 - b. Providing written evidence that the radiographer is active in the practice of industrial radiography and has participated in continuing education during the previous five-year period.
5. If an individual cannot provide the written evidence required in subsection (4)(b), the individual shall retake the certification examination.
 6. A radiographer shall provide the registrant with proof of certification in the form of a card issued by the certifying organization that contains:
 - a. A picture of the certified radiographer,
 - b. The radiographer's certification number,
 - c. The date the certification expires, and
 - d. The radiographer's signature.
- B.** A registrant shall not allow an individual to act as a radiographer until the individual:
1. Receives copies of and instruction in the requirements of this Article, applicable Sections of Articles 4 and 10 and R12-1-107, the Agency registration or registrations under which the individual will perform industrial radiography, and the registrant's operating and emergency procedures;
 2. Demonstrates an understanding of the registrant's registration and operating and emergency procedures by successful completion of a written or oral examination that covers the relevant material;
 3. Receives training in:
 - a. Use of the registrant's radiation machine,
 - b. Daily inspection of the radiation machine, and
 - c. Use of radiation survey instruments; and
 4. Demonstrates an understanding of the use of the radiation machines and survey instruments described in subsection (B)(3) by successful completion of a practical examination covering this material.
- C.** A registrant shall not allow an individual to act as a radiographer's assistant until the individual:
1. Receives copies of and instruction in the requirements of this Article, applicable Sections of Articles 4 and 10 and R12-1-107, the Agency registration or registrations under which the radiographer will perform industrial radiography, and the registrant's operating and emergency procedures;
 2. Develops competence to use, under the personal supervision of the radiographer, the registrant's radiation machine and radiation survey instruments; and
 3. Demonstrates understanding of the instructions provided under subsection (C)(1) by successfully completing a written test on the subjects covered and demonstrates competence using the hardware described in subsection (C)(2) by successfully completing a practical examination.
- D.** A registrant shall provide refresher safety training for each radiographer and radiographer's assistant at intervals that do not exceed 12 months.
- E.** Except where an individual serves both as a radiographer and an RSO, the RSO or the RSO's designee shall design and implement an inspection program to examine the job performance of each radiographer and radiographer's assistant and ensure that the Agency's rules and registration requirements, and the registrant's operating and emergency procedures, are followed. The inspection program shall:
1. Include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation, at intervals that do not exceed six months; and
 2. Provide that, if a radiographer or a radiographer's assistant has not participated in an industrial radiographic operation for more than six months since the last inspection, each radiographer shall demonstrate knowledge of the training requirements in subsection (B)(3) and each radiographer's assistant shall demonstrate knowledge of the training requirements of subsection (C)(2) by a practical examination before these workers can participate in a radiographic operation.
- F.** A registrant shall maintain records of the training required in this Section, including certification documents, written and practical examinations, refresher safety training documents, and inspection documents, in accordance with subsection (I).
- G.** A registrant shall include the following subjects in the training required under subsection (A):
1. Fundamentals of radiation safety, including:
 - a. Characteristics of x-ray radiation;
 - b. Units of radiation dose and quantity of radioactivity;
 - c. Hazards of exposure to radiation;
 - d. Levels of radiation from x-ray machines; and
 - e. Methods of controlling radiation dose (time, distance, and shielding);
 2. Radiation detection instruments, including:
 - a. Use, operation, calibration, and limitations of radiation survey instruments;
 - b. Survey techniques; and
 - c. Use of personnel monitoring equipment;
 3. Equipment topics, including:
 - a. Operation and control of radiation machines; and
 - b. Inspection and maintenance of each radiation machine and survey instrument;
 4. The requirements of pertinent Agency rules; and
 5. Case histories of accidents in radiography.
- H.** A registrant shall maintain records of radiographer certification in accordance with subsection (I)(1) and provide proof of certification as required in subsection (A)(1).
- I.** A registrant shall maintain the following records for three years after each record is made:
1. Records of training for each radiographer and each radiographer's assistant. For radiographers, the records shall include radiographer certification documents and verification of certification status. All records shall include copies of written tests, dates of oral and practical examinations, and names of individuals who conducted and took the oral and practical examinations; and
 2. Records of annual refresher safety training and semi-annual inspections of job performance for each radiographer and each radiographer's assistant. The records for the annual refresher safety training shall list topics discussed during training, the date of training, and names of each instructor and attendee. For inspections of job performance, the records shall include a list of items checked during the inspection and any non-compliance observed by the RSO.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

Appendix A. Standards for Organizations that Provide Radiography Certification

Note: For purposes of this Article an "independent certifying organization" means an organization that meets all of the criteria in this Appendix.

I. Requirements for an Organization that Provides Radiographer Certification

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To qualify to provide radiography certification, an organization shall:

- A. Be a society or association, with members who participate in, or have an interest in, the field of industrial radiography;
- B. Not restrict membership because of race, color, religion, sex, age, national origin, or disability;
- C. Have a certification program that is open to nonmembers, as well as members;
- D. Be an incorporated, nationally recognized organization that is involved in setting national standards of practice within its fields of expertise;
- E. Have a staff comparable to other nationally recognized organizations, a viable system for financing its operations, and a policy-and decision-making review board;
- F. Have a set of written, organizational by-laws and policies that address conflicts of interest and provide a system for monitoring and enforcing the by-laws and policies;
- G. Have a committee, with members who can carry out their responsibilities impartially, review and approve the certification guidelines and procedures, and advise the organization's staff in implementing the certification program;
- H. Have a committee, with members who can carry out their responsibilities impartially, review complaints against certified individuals, and determine sanctions;
- I. Have written procedures that describe all aspects of the organization's certification program;
- J. Maintain records of the current status of each individual's certification and administration of the certification program;
- K. Have procedures to ensure that certified individuals are provided due process with respect to administration of the certification program, including a process for becoming certified and a process for imposing sanctions against certified individuals;
- L. Have procedures for proctoring examinations and qualifying proctors. The organization, through these procedures, shall ensure that an individual who proctors an examination is not employed by the same company or corporation (or a wholly-owned subsidiary of the company or corporation) that employs an examinee;
- M. Exchange information about certified individuals with the Agency, other independent certifying organizations, the NRC, or Agreement States and allow periodic review of its certification program and related records; and
- N. Provide a description to the Agency of its procedures for choosing examination sites and providing a favorable examination environment.

II. Requirements for a Certification Program

An independent certifying organization shall ensure that its certification program:

- A. Requires an applicant for certification to:
 1. Obtain training in the subjects listed in R12-1-1146(G), and
 2. Satisfactorily complete a written examination that covers these subjects;
- B. Require an applicant for certification to provide documentation demonstrating that the applicant has:
 1. Received training in the subjects listed in R12-1-1146(G);
 2. Satisfactorily completed the on-the-job training required in R12-1-1146(A); and
 3. Received verification from a registrant that the applicant has demonstrated the capability of independently working as a radiographer;
- C. Provides procedures that protect examination questions from disclosure;

- D. Provides procedures for denying certification to an applicant and revoking, suspending, and reinstating a certificate;
- E. Provides a certification period that is not less than three years or more than five years, procedures for renewing certifications and, if the procedures allow renewals without examination, a system for assessing evidence of recent full-time employment and annual refresher training; and
- F. Provides a timely response to inquiries, by telephone or letter, from members of the public, about an individual's certification status.

III. Requirements for a Written Examination

An independent certifying organization shall ensure that its examination:

- A. Is designed to test an individual's knowledge and understanding of the subjects listed in R12-1-1146(G) or equivalent NRC or Agreement State requirements;
- B. Is written in a multiple-choice format; and
- C. Has psychometrically valid questions drawn from a question bank and based on the material in R12-1-1146(G).

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 12. ADMINISTRATIVE PROVISIONS

R12-1-1201. Timeliness

- A. Any application, request, response, or report required by any rule, order, application, or letter shall be considered timely if it is postmarked on or before the due date, or hand-delivered to the Agency office before 5:00 p.m. on the due date. If the due date falls on a Saturday, a Sunday, or a legal holiday, the due date is extended to the end of the next day that is not a Saturday, a Sunday, or legal holiday.
- B. As used in this Article, "working days" are all days other than Saturdays, Sundays, or legal holidays prescribed in A.R.S. § 1-301.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1202. Administrative Hearings

- A. All hearings shall be governed by Title 41, Chapter 6, Article 10.
- B. If the Radiation Regulatory Hearing Board is conducting a hearing, all motions and rulings shall be in writing, except those made during the hearing may be oral. The Board shall ensure that any agreements reached during a conference are incorporated in the record, and that all hearings are recorded.
- C. If it is necessary for an administrative law judge or the Board to visit the site of an alleged violation or activity that is regulated by the Agency in order to supplement testimonial or documentary evidence presented at the hearing, the party that proposed the visit shall enter the purpose of the visit and all pertinent observations into the record.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1203. Procedures for Rulemaking Public Hearings

- A. Hearings on proposed rulemaking by the Agency shall be held before the Director or another person designated by the Director to act as the hearing officer.

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- B. All hearings shall be governed by the Administrative Procedure Act, A.R.S. §§ 41-1021, 41-1021.01 through 41-1025, 41-1028, 41-1029, and 41-1031.
- C. The hearing shall be recorded and shall be retained as part of the record of the rulemaking.
- D. A written summary of the comments presented shall be prepared along with a written response to the comments by the Agency staff and retained with the record of the rulemaking.
- E. The request for hearing shall identify the rule involved or propose a new rule.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1).

R12-1-1204. Initiation of Administrative Hearings

- A. An administrative hearing shall be initiated by the Director or commenced in response to the request of any person directly affected by an order of the Director or a proposed licensing or registration action by the Agency.
- B. If the Director initiates an administrative hearing pursuant to R12-1-1220, the order may incorporate a notice of hearing; otherwise a notice of any hearing and the notice of violation shall be issued separately.
- C. For any hearing on a proposed licensing or registration action, only a notice of hearing shall be issued.
- D. A notice of hearing shall specify the time, place, and nature of the hearing and may include specification of the legal authority and jurisdiction under which the hearing is to be held; the particular sections of the statutes, rules, or license conditions involved; the amount of the penalty and other sanctions proposed, if appropriate; and a statement of matters asserted and issues involved.
- E. A hearing may be requested by filing a written request for hearing with the Director within the time limit specified in the pertinent order or notice. A request for hearing on a regulatory action not subject to public notice requirements may be filed at any time, provided that a request to reconsider a licensing or registration action shall be filed within 30 days of the issuance of the licensing or registration action.
 1. The request for a hearing to appeal an order shall identify the order which the person desires to appeal and include a statement reciting the matters asserted, issues involved, and the applicable statutes or rules. The Agency shall respond within 30 calendar days to the person and forward the request and response to the Chairperson of the Board.
 2. The request for a hearing to appeal a licensing or registration action shall identify the action appealed. The Agency shall respond within 30 calendar days to the person and forward the request and response to the Chairperson of the Board.
 3. The request for hearing shall include a statement identifying the interest claimed to be affected by the action. If a statement is not provided or is clearly insufficient, the Chairperson may deny the request and notify the person of that action.
 4. If the request for hearing is denied for insufficiency, the requestor shall have five days from the notice of denial within which to file an amended request for hearing. The amended request shall refer back to the original request for hearing.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).

R12-1-1205. Intervention in Administrative Hearings; Director as a Party

- A. Any person may submit a timely motion to intervene in a proceeding if an unconditional right to intervene is granted by law or the applicant claims an interest to any property or transaction affected by the proceeding.
- B. A motion to intervene shall be in writing and shall state the reason why the applicant should be allowed to intervene. If the applicant claims an interest in property or in a transaction affected by the proceeding, the applicant shall demonstrate that the result of the proceeding may as a practical matter impair or impede protection of that interest.
- C. The applicant shall serve the motion upon the administrative law judge or the Board, as appropriate, and the Director as a party at least five working days before the hearing. An application for leave to intervene shall not be granted, if by doing so, the issues will be unduly broadened.
- D. If two or more persons have substantially similar positions, the administrative law judge may declare them a class of interested persons for purposes of the hearing. The members of a class shall designate one person to be spokesperson for the class. More than one class may be established for a hearing.
- E. The Director is party to all administrative hearings.

Historical Note

Adopted effective June 23, 1983 (Supp. 83-3). Section repealed, new Section adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1206. Repealed**Historical Note**

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1207. Rehearing or Review

- A. The Board may grant a rehearing or review of a decision for any of the following reasons, materially affecting a party's rights:
 1. Irregularity in the administrative proceedings or any order or abuse of discretion, that deprived a party of a fair hearing;
 2. Misconduct of the Board, an administrative law judge, or the prevailing party;
 3. Accident or surprise that could not have been prevented by ordinary prudence;
 4. Newly discovered material evidence that could not, with reasonable diligence have been discovered and produced at the original hearing;
 5. Excessive or insufficient penalties;
 6. Error in the admission or rejection of evidence or other errors of law occurring at the administrative hearing or during the progress of the proceedings;
 7. That the decision is not justified by the evidence or is contrary to law.
- B. The Board may affirm or modify a decision or grant a rehearing to all or any of the parties and on all or part of the issues for any of the reasons listed in subsection (A). An order modifying a decision or granting a rehearing shall specify with particularity the ground or grounds for the order. A rehearing shall cover only the subject matters specified in the order.
- C. No later than 15 working days after the date on the decision the Board may, on its own initiative, order a rehearing or review of its decision for any reason for which it might have granted a rehearing on motion of a party. After giving the parties notice and an opportunity to be heard on the matter, the

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Board may grant a motion for rehearing or review for a reason not stated in the motion.

- D.** If a motion for rehearing or review is based upon affidavits, they shall be served with the motion. An opposing party may, within 30 calendar days after service, serve opposing affidavits. This period of time may be extended by the Board if good cause is shown or a written stipulation is received from both parties. The Board may permit reply affidavits.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1208. Repealed

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1209. Notice of Violation

- A.** Except as provided in R12-1-1220, the Agency shall issue a notice of violation and provide time, as specified in R12-1-1210, for the registrant or licensee to respond before the Director issues any order to modify, suspend, or revoke a license or registration, or to impose a civil penalty.
- B.** The notice shall specify:
1. The severity level and circumstances of the alleged violation;
 2. The particular statute, rule, or registration or license condition violated; and
 3. The division of the registration or license.
- C.** The notice shall specify a civil penalty if one is proposed by the Agency.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 7 A.A.R. 2584, effective June 8, 2001 (Supp. 01-2).
Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1210. Response to Notice of Violation

- A.** Except as provided in subsection (D), within 30 calendar days of the date of the notice, or longer time period specified in the notice, the person charged with the violation shall submit a written response that includes a description of:
1. The actions taken to achieve compliance and the results of the actions;
 2. The actions that are proposed and the date when full compliance is expected to be achieved; and
 3. If the violation is a repeat violation, why corrective actions taken previously did not prevent the violation from recurring and why the new actions will be effective.
- B.** If the person charged with a violation submits a timely response, the Director, in consideration of the answer and the severity level of the violation, shall do one of the following:
1. Issue an initial order conditionally imposing the full amount of the proposed civil penalty and any other sanctions proposed;
 2. Issue an initial order conditionally mitigating or waiving the proposed civil penalty under R12-1-1214(B);
 3. Waive the penalty as authorized under R12-1-1216(C);
 4. Enter into a consent agreement as authorized under R12-1-1222.
- C.** If the Agency does not receive an adequate and timely response to the notice, the Director shall issue an initial order

conditionally imposing any or all sanctions and civil penalties proposed in the notice of violation. If no civil penalty was proposed, the initial order may impose the base civil penalty listed in R12-1-1216.

- D.** Response to the notice of violation as otherwise required in this Section may be waived by the Agency, if the Agency determines that a response is not required.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1211. Initial Orders

- A.** Initial orders are valid for 30 calendar days after the date of the order, or until the other time specified in the order, during which time the person charged may:
1. Pay the civil penalty proposed and accept any proposed sanction, or
 2. Request a hearing before the Board.
- B.** If a timely request for a hearing is not received, the order shall become final.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1212. Request for Hearing in Response to an Initial Order

- A.** In a request for a hearing, a person charged with a violation shall include a statement of the issues and the explanations and the arguments supporting denial of the violation or demonstrating extenuating circumstances, errors in notice, or any other reasons for not imposing the civil penalty, sanction, or both.
- B.** The statement shall identify all issues. The failure to include an issue may, at the option of the Board, foreclose consideration of that issue. If a statement is not provided or is insufficient, the Board may summarily determine the issues.
- C.** The person charged may admit the violation and request a reduction of the proposed civil penalty based on extenuating circumstances.
- D.** The person charged may waive oral proceedings and request dismissal of any or all of the charged violations, reduction of the civil penalties, or modification of any other imposed sanction based on consideration by the Board of the written statement.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1213. Severity Levels of Violations

- A.** The following violations are classified as severity level I violations:
1. Any failure, malfunction, or insufficiency of a safety system which may result in
 - a. Radiation exposure to a person,
 - b. A concentration of radionuclides; or
 - c. A radiation level, in excess of 10 times the limits specified in 12 A.A.C.1, or 10 times the prescribed therapeutic patient dose.
 2. Any inaccurate or incomplete information that is intentionally provided by a licensee or registrant official, and if the information had been complete and accurate at the

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- time it was provided, would have likely resulted in action such as an immediate order required to protect the public health and safety.
3. Any information that the Agency requires be kept by a licensee or registrant that is incomplete or inaccurate because of falsification by or with the knowledge of a licensee or registrant official, and if the information had been complete and accurate at the time it was reviewed by the Agency, would have likely resulted in action such as an immediate order required to protect the public health and safety.
 4. Any concealment or attempted concealment of a severity level I violation of the Act, 12 A.A.C. 1, or a license condition. This is a separate violation in addition to the original violation.
 5. Any concealment or attempted concealment of a severity level II violation of the Act, 12 A.A.C. 1, or a license condition. This violation shall increase the severity level of the original violation by one level.
 6. For the purposes of subsections (A)(2) and (3) above the term "licensee or registrant official" means the owner, a partner, a corporate officer, a radiation safety officer, the individual signing an application for a license or registration, or the chairman of any radiation safety committee supervising the radiation safety program of the licensee or registrant.
- B.** The following violations are classified as severity level II violations:
1. Any failure, malfunction, or insufficiency of a safety system which may result in:
 - a. Radiation exposure to a person,
 - b. A concentration of radionuclides, or
 - c. A radiation level, in excess of two times the limits specified in 12 A.A.C. 1, or two times the prescribed therapeutic patient dose.
 2. Any attempt to prevent an Agency inspection.
 3. Any concealment or attempted concealment of a severity level III violation of the Act, 12 A.A.C. 1, or a license condition by a licensee or registrant official as defined in subsection (A)(6). This violation shall increase the severity level of the original violation by one level.
 4. Significant information provided and designated by a licensee or registrant and not previously provided to the Agency because of careless disregard on the part of a licensee official or registrant.
- C.** The following violations are classified as severity level III violations:
1. Any failure, malfunction, or insufficiency of a safety system, or loss of control over a radiation source, which may result in:
 - a. Radiation exposure to a person,
 - b. A concentration of radionuclides, or
 - c. A radiation level in excess of the limits specified in 12 A.A.C. 1, or 20% higher than the prescribed therapeutic patient dose.
 2. Any concealment or attempted concealment of a severity level IV or V violation of the Act, 12 A.A.C. 1, or a registration or license condition. This violation shall increase the severity level of the original violation by one level.
 3. Any violation of the safety requirements for the use, storage, disposal, or the preparation for transportation of sources of radiation, as prescribed in the Act, 12 A.A.C. 1, or in a license or registration condition, provided the violation does not meet the criteria for a severity level I or II violation and the licensee or registrant does not maintain a radiation protection program meeting the requirements of R12-1-407.
 4. Any factually incorrect statement upon which the Agency relied or would have relied in consideration of any action.
 5. Any unlawful attempt to interfere with the progress of an inspection by the Agency.
 6. The acquisition of any source of radiation without the applicable current registration or license, unless otherwise authorized by these rules; or use of the source outside the scope of the current registration or license.
 7. The continued use of sources of radiation after April 1, if the annual fee has not been paid for the current year.
- D.** The following violations are classified as severity level IV violations:
1. Any violation of R12-1-407;
 2. Any violation of the safety requirements for the use, storage, disposal, or preparation for transportation of sources of radiation, prescribed in the Act, 12 A.A.C. 1, or in a license or registration condition, provided the violation does not meet the criteria for a severity level I, II or III violation;
 3. Failure to maintain records of mammography quality control tests required in R12-1-614.
 4. Any failure to comply with the reporting requirements in the Act or 12 A.A.C. 1.
- E.** The following violations are classified as severity level V violations:
1. Failure of a registrant or a licensee to comply with the recordkeeping requirements of:
 - a. The Act;
 - b. 12 A.A.C. 1; or
 - c. A registration or facility certification, or license condition, provided that all safety requirements prescribed in the Act, 12 A.A.C. 1, or in a license or registration condition are met or otherwise demonstrated.
 2. If compliance with all safety requirements cannot be demonstrated by the registrant or licensee the failure to comply with the recordkeeping requirements is classified as a level IV violation.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1214. Mitigating Factors

- A.** The Agency may refrain from issuing a Notice of Violation for Severity Level IV or V violations identified by the registrant or licensee provided the severity level IV or V violations are identified in an inspection report, the report includes a brief description of the corrective action, and the violation meets all of the following criteria:
1. It was identified by the licensee, as a result of an event discovered by the licensee or registrant;
 2. It was not a violation that could reasonably be expected to have been prevented by the licensee's or registrant's corrective action for a previous violation or a previous licensee or registrant finding;
 3. It was or will be corrected within a reasonable time, by specific corrective action committed to by the registrant or licensee by the end of the inspection. The corrective action shall include comprehensive measures that will prevent reoccurrence;
 4. It was not a willful violation or, if it was willful:

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- a. The violation was reported to the Agency;
 - b. The violation appears to be the isolated action of an employee without management involvement and the violation was not caused by lack of management oversight;
 - c. Significant remedial action was taken by the licensee or registrant, demonstrating the seriousness of the violation to all affected personnel.
- B. The Director may:**
1. Reduce the scheduled civil penalty, including any augmentation, by 50% for the discovery, remedy, and voluntary reporting of a severity level I or II violation by the registrant or licensee; or
 2. Waive the scheduled civil penalty, including augmented civil penalties, for the discovery, remedy, and voluntary reporting of a severity level III, IV, or V violation by the registrant or licensee. For the purposes of this rule, "voluntary reporting" means that the registrant or licensee has notified the Agency of a violation, the reporting of which may or may not be required under 12 A.A.C. 1.
- Historical Note**
Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).
- R12-1-1215. License and Registration Divisions**
- A.** Each registrant or license type is classified into one of three administrative sanction divisions.
1. Division I licenses and registrations:
 - a. Broad Academic Class A,
 - b. Broad Academic Class B,
 - c. Broad Academic Class C,
 - d. Broad Industrial Class A,
 - e. Broad Medical,
 - f. Class C Laser Facility,
 - g. Distribution,
 - h. Fixed Gauge Class A,
 - i. Industrial Radiography Class A,
 - j. Low Level Radioactive Waste Disposal Site,
 - k. Major Accelerator Facility,
 - l. Medical Materials Class A,
 - m. Medical Teletherapy,
 - n. NORM Commercial Disposal Site,
 - o. Nuclear Laundry,
 - p. Nuclear Pharmacy,
 - q. Open Field Irradiator,
 - r. Secondary Uranium Recovery,
 - s. Waste Processor Class A,
 - t. Well Logging,
 - u. X-Ray Machine Class A.
 2. Division II licenses and registrations:
 - a. Broad Industrial Class B,
 - b. Broad Industrial Class C,
 - c. Class B Industrial Radiofrequency Facility,
 - d. Class B Laser Facility,
 - e. Class C Industrial Radiofrequency Facility,
 - f. Fixed Gauge Class B,
 - g. Health Physics Class A,
 - h. Industrial Radiation Machine,
 - i. Industrial Radiography Class B,
 - j. Laser Light Show,
 - k. Limited Academic,
 - l. Medical Imaging Facility,
 - m. Medical Laser,
 - n. Medical Materials Class B,
 - o. Medical Radiofrequency Device Facility,
 3. Division III licenses and registrations:
 - a. Class A Industrial Radiofrequency Facility,
 - b. Class A Laser Facility,
 - c. Gas Chromatograph,
 - d. General Depleted Uranium,
 - e. General Industrial,
 - f. General Medical,
 - g. General Veterinary Medicine,
 - h. Health Physics Class B,
 - i. Laboratory,
 - j. Leak Detector,
 - k. Limited Industrial,
 - l. Medical Materials Class C,
 - m. Other Ionizing Radiation Machine,
 - n. Other Nonionizing Radiation Machine,
 - o. Portable Gauge,
 - p. Possession Only,
 - q. Radioactive waste transfer-for-disposal,
 - r. Unclassified,
 - s. Veterinary Medicine,
 - t. X-ray Machine Class C.
 - u. Class A Medical (non-cosmetic) Radiofrequency Facility,
 - v. Class B Medical (non-cosmetic) Radiofrequency Facility,
 - w. Class C Medical (non-cosmetic) Radiofrequency Facility,
 - x. Class D Medical (non-cosmetic) Radiofrequency Facility.
- B.** Any person required by the Act to register the use of a general license with the Agency, or to obtain a specific license from the Agency, is considered a licensee of the appropriate type notwithstanding the failure of the person to register or obtain a license.
- C.** The Agency shall classify each person that possesses an out-of-state specific license for the use of radioactive material and operates in Arizona under reciprocal recognition, as prescribed in R12-1-320 and authorized in R12-1-1302(D)(16), by placing the person into the administrative sanction division listed in subsection (A) that best defines the out-of-state, licensed activities.
- D.** For administrative purposes, the following persons are classified with the Division III licensees and registrants in subsection (A)(3):
1. Any person not required to register the use of a general license,
 2. Any person not required to obtain a specific license,
 3. Any person not required to register a source of radiation who violates the Act or 12 A.A.C. 1, and
 4. Any person registered to provide x-ray machine service.
- Historical Note**
Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 21 A.A.R. 289, effective April 6, 2015 (Supp. 15-1).

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R12-1-1216. Civil Penalties

- A.** Except as augmented by R12-1-1217, the schedule of civil penalties is as follows:
1. Severity level I violations:
 - a. Division I registration or license -- \$4,000;
 - b. Division II registration or license -- \$3,000;
 - c. Division III registration or license -- \$2,000.
 2. Severity level II violations:
 - a. Division I registration or license -- \$3,000;
 - b. Division II registration or license -- \$2,000;
 - c. Division III registration or license -- \$1,000.
 3. Severity level III violations:
 - a. Division I registration or license -- \$2,000;
 - b. Division II registration or license -- \$1,000;
 - c. Division III registration or license -- \$500.
 4. Severity level IV violations:
 - a. Division I registration or license -- \$1,000;
 - b. Division II registration or license -- \$500;
 - c. Division III registration or license -- \$250.
 5. Severity level V violations:
 - a. Division I registration or license -- \$500,
 - b. Division II registration or license -- \$250,
 - c. Division III registration or license -- \$125.
- B.** Payment of civil penalties for severity level I and severity level II violations may not be avoided merely by rectifying the condition; however, the Board may mitigate or waive the penalty upon determining a violation meets all of the following:
1. It was not a violation that could reasonably be expected to have been prevented by the licensee's or registrant's corrective action for a previous violation or a previous licensee or registrant finding;
 2. It was or will be corrected within the time given for corrections, by specific corrective action committed to by the licensee or registrant by the end of the inspection, which includes immediate and comprehensive measures to prevent recurrence;
 3. It was not a willful violation.
- C.** The Director or Board shall waive payment of penalties for severity level III through severity level V violations provided:
1. The violation is not subject to augmentation under R12-1-1217; and
 2. The registrant or licensee submits a timely and adequate response to the notice; rectifies the conditions which appear to have caused the violation; and complies with the Act, 12 A.A.C. 1, registration, and license conditions.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1217. Augmentation of Civil Penalties

- A.** A continuing violation, for the purposes of calculating the proposed civil penalty, is considered a separate violation for each day it continues. The second (or successive) day of a continuing violation is not considered a repeat violation of the violation occurring on the first day.
- B.** If a second severity level I violation is committed within five years, the Agency shall increase the base civil penalty by 100%, provided the registration or license is not revoked under R12-1-1219.
- C.** If a second severity level II violation is committed within a period of five years, the Agency shall increase the base civil penalty by 50%, provided the registration or license is not revoked under R12-1-1219.

- D.** If a severity level III violation is repeated within five years, the Agency shall increase the base civil penalty by 50%. If the same severity level III violation is repeated a second time within five years, the base civil penalty shall be increased by 100%, provided the registration or license is not revoked under R12-1-1219.
- E.** If a severity level IV violation is repeated within five years, the Agency shall propose the base d civil penalty.
1. If the same violation occurs three times within five years, the Agency shall increase the base civil penalty by 50%.
 2. If the same violation occurs four times within five years, the Agency shall increase the base civil penalty by 100%, provided the registration or license is not revoked under R12-1-1219.
- F.** If more than three severity level V violations are observed during two consecutive inspections, the Agency shall impose a civil penalty for each violation. The base civil penalty for each violation is the base civil penalty assessed for a severity level V violation. If the inspection shows repetition of a violation the base civil penalty for each repeat violation is the base civil penalty assessed for a severity level IV violation. Subsection (E) does not apply to penalties under this subsection.
- G.** Other rights and procedures are not affected by the repeat nature of a violation.
- H.** A person may avoid the penalties in subsections (D) and (E) by demonstrating to the Director in the response to the penalty that the violation meets all of the following criteria:
1. It was not a violation that could reasonably be expected to have been prevented by the licensee's or registrant's corrective action for a previous violation or a previous licensee or registrant finding;
 2. It was or will be corrected within the time given for correction, by specific corrective action committed to by the licensee or registrant by the end of the inspection, which includes immediate and comprehensive measures to prevent recurrence;
 3. It was not a willful violation.
- I.** Notwithstanding any other provision of this Section, the Agency shall not impose a penalty that exceeds a maximum of \$5,000 for each violation for each day up to a maximum of \$25,000 for any 30-day period.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1218. Payment of Civil Penalties

- A.** A person shall pay civil penalties imposed under this Article by certified check or money order payable to the Agency and mailed or delivered to the Agency at the address shown on the notice of violation.
- B.** Payment of a civil penalty is due 30 calendar days after the effective date of the final order imposing the civil penalties, unless an alternate payment schedule is agreed upon before that date. A payment schedule shall not extend beyond one year after the due date.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1219. Additional Sanctions-Show Cause

- A.** If a severity level I violation is repeated or if any second severity level I violation is committed within 10 years, the Agency

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shall require the registrant or licensee to show cause why the registration or license should not be suspended or revoked.

- B. If any second severity level II violation is committed within five years, or if a severity level II violation involving radioactive effluent releases, excessive radiation levels, or radiation overexposure to an individual is committed within five years of a similar severity level I violation, the Agency shall require the registrant or licensee to show cause why the registration or license should not be suspended or revoked.
- C. If repeated or different severity level III violations are committed on three separate occasions within any five year period, the Agency may require the registrant or licensee to show cause why the registration or license should not be suspended or revoked.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1220. Escalated Enforcement

- A. The Director may issue an order to suspend, revoke, or modify a registration or license, or impound a radiation source for:
 - 1. Any severity level I violation; or
 - 2. Any of the following occurring within a five-year period:
 - a. A repeat severity level II violation,
 - b. A different second severity level II violation, or
 - c. A severity level II violation after a severity level I violation.
- B. The Director may issue an order impounding the radiation source or suspending, revoking, or modifying the registration or license upon determining that conditions exist which cause a potential for a severity level I or severity level II violation.
- C. The Agency shall hold hearings according to A.R.S. § 30-688.
- D. An order to impound a radiation source, or an order to suspend, revoke, or modify a registration or a license shall remain in effect until the order is suspended or modified by the Board according to A.R.S. § 30-688.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1221. Reserved

R12-1-1222. Enforcement Conferences

- A. An enforcement conference consists of a meeting in person between management personnel of the registrant or licensee and the Agency.
- B. The enforcement conference is informal; however, the Agency shall make a record of items discussed and decisions reached. Statements made at the conference shall not be introduced in evidence at a formal hearing unless all parties have consented.
- C. Based on the results of the conference, the Agency may:
 - 1. Dismiss the notice of violation;
 - 2. Enter into a consent agreement; or
 - 3. Continue with, or initiate, formal proceedings.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1).
Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1223. Registration and Licensing Time-frames

The Agency shall perform an administrative completeness review and substantive review of an application for a new or renewal license or registration; or an amendment to a license or registration within the time-frames in Table A. The Agency shall review an application for an amendment to an existing license or registration that changes the license category listed in R12-1-1306, using the time-frames specified for the requested category.

Historical Note

Adopted effective December 9, 1998 (Supp. 98-4).
Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

Table A. Registration and Licensing Time-frames

REGISTRATION AND LICENSING TIME-FRAMES

License or Registration category in R12-1-1306	Administrative Completeness Review Time-frame, in days	Substantive Review Time-frame, in days	Overall Time-frame, in days
A1	90	30	120
A2	90	30	120
A3	90	30	120
A4	60	30	90
B1	90	30	120
B2	90	30	120
B3	90	30	120
B4	90	30	120
B5	90	30	120
B6	40	20	60
C1	60	30	90
C2	60	30	90
C3	60	30	90
C4	60	30	90
C5	60	30	90
C6	60	30	90

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C7	60	30	90
C8	90	30	120
C9	60	30	90
C10	40	20	60
C11	90	30	120
C12	90	30	120
C13	90	30	120
C14	90	30	120
C15	90	30	120
C16	90	30	120
C17	90	30	120
D1	90	30	120
D2	90	30	120
D3	90	30	120
D4	40	20	60
D5	40	20	60
D6	90	30	120
D7	40	20	60
D8	60	30	90
D9	90	30	120
D10	90	30	120
D11	1095	365	1460
D12	730	180	910
D13	365	90	455
D14	90	30	120
D15	40	20	60
D16	20	10	30
D17	40	20	60
D18	90	30	120
D19	365	120	485
E1	40	20	60
E2	40	20	60
E3	40	20	60
E4	40	20	60
E5	90	30	120
E6	90	30	120
F1	40	20	60
F2	40	20	60
F3	40	20	60
F4	40	20	60
F5	20	10	30
F6	40	20	60
F7	40	20	60
F8	40	20	60
F9	40	20	60
F10	40	20	60
F11	40	20	60
F12	40	20	60
F13	40	20	60
F14	40	20	60
F15	40	20	60
F16	90	30	120

Footnote: “administrative completeness review time-frame”; “substantive review time-frame,” and “overall time-frame” are defined in A.R.S. § 41-1072.

Historical Note

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Adopted effective December 9, 1998 (Supp. 98-4).
Amended by final rulemaking at 9 A.A.R. 4302, effective
November 14, 2003 (Supp. 03-3). Amended by final
rulemaking at 21 A.A.R. 289, effective April 6, 2015
(Supp. 15-1).

ARTICLE 13. LICENSE AND REGISTRATION FEES**R12-1-1301. Definition**

“Combined” means the Agency has granted authorized activities contained in two or more license types in a single license document, requiring the payment of a single license fee for the more expensive license of the planned combination.

Historical Note

Adopted effective November 19, 1982 (Supp. 82-6).
Amended effective November 28, 1983 (Supp. 83-6).
Amended subsection (B) and added a new subsection (C)
effective November 28, 1986 (Supp. 86-6). Section
repealed, new Section adopted effective November 5,
1993 (Supp. 93-4). Amended by final rulemaking at 5
A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1302. License and Registration Categories

A. Category A licenses are those specific licenses which authorize a school, college, university, or other teaching facility to possess and use radioactive materials for instructional or research purposes.

1. A broad academic class A license is any category A license which meets the specifications of R12-1-310(A)(1).
2. A broad academic class B license is any category A license other than a broad academic class A license which meets the specifications of R12-1-310(A)(2).
3. A broad academic class C license is any category A license other than a broad academic class A or B license which meets the specifications of R12-1-310(A)(3).
4. A limited academic license is any category A license which authorizes only those radioisotopes, forms, and quantities individually specified in the license.

B. Category B licenses are those specific or general licenses which authorize the application of radioactive material or the radiation from it to a human being for medical diagnostic, therapeutic, or research purposes, or the use of radioactive material in medical laboratory testing. Except for a type B6, general medical license, the Agency shall not combine a category B license with a license of any other category.

1. A broad medical license is any category B license which meets the specifications of R12-1-310(A)(1) and meets the requirements of 12 A.A.C. 1, Article 7. A broad medical license may authorize any medical use other than teletherapy.
2. A medical materials class A license is any specific category B license other than a broad medical license, which authorizes the use of radiopharmaceuticals and sealed sources containing radioactive materials for a therapeutic purpose in quantities which require hospitalization of the patient for radiation safety purposes. The license may authorize other radioactive materials and other medical uses, except teletherapy.
3. A medical materials class B license is any specific category B license which authorizes the diagnostic or therapeutic use, other than teletherapy, of radioactive materials only in limited quantities such that the patient need not be hospitalized for radiation safety purposes.
4. A medical materials class C license is any specific category B license which authorizes possession of specified radioisotopes only in the form of sealed sources for treat-

ment of the eye or skin or for use in diagnostic medical imaging devices.

5. A medical teletherapy license is a specific category B license which solely authorizes radioisotopes in the form of multi-curie sealed sources for use in external beam therapy. The Agency shall not combine a medical teletherapy license with any other type of category B license.
 6. A general medical license is a registration of the use of radioactive material pursuant to R12-1-306(D) or R12-1-306(E). A general medical license may be combined into a broad medical, medical materials class A, or medical materials class B license.
- C.** Category C licenses are those specific or general licenses authorizing the use of radioactive materials in any activity other than those authorized by a category A, B, or D license. Except as specifically authorized in this Section, the Agency shall not combine a category C license with any other type of license.
1. A broad industrial class A license is any category C license which meets the specifications of R12-1-310(A)(1). The Agency may combine a broad industrial class A license with any other category C license except industrial radiography, open field irradiator, or well logging licenses.
 2. A broad industrial class B license is any category C license other than a broad industrial class A license which meets the specifications of R12-1-310(A)(2). The Agency may combine a broad industrial class B license with any other category C license except industrial radiography, open field irradiator, or well logging licenses.
 3. A broad industrial class C license is any category C license other than a broad industrial class A or B license which meets the specifications of R12-1-310(A)(3). The Agency may combine a broad industrial class C license with any other category C license except industrial radiography, open field irradiator, or well logging licenses.
 4. A limited industrial license is a specific category C license authorizing the possession of the radioactive materials authorized in R12-1-305(A), or R12-1-306(A), (C) or (F) for uses authorized in those subsections, but in quantities greater than authorized by those subsections.
 5. A portable gauge license is a specific category C license which authorizes radioactive materials in the form of sealed sources for use in measuring or gauging devices designed and manufactured to be transported to the location of use. The Agency may combine a portable gauge license with any broad scope industrial license or a fixed gauge class A license.
 6. A fixed gauge class A license is a specific category C license which authorizes the possession of 50 or more measuring or gauging devices containing radioactive materials, where each device is permanently mounted for use at a single location.
 7. A fixed gauge class B license is a specific category C license which authorizes the possession of 1 through 49 measuring or gauging devices containing radioactive materials, where each device is permanently mounted for use at a single location.
 8. A leak detector license is a specific category C license which authorizes the use of radioisotopes in the form of a gas to test hermetic seals on electronic packages.
 9. A gas chromatograph license is a specific category C license which authorizes the use of radioactive materials as ionization sources in gas chromatography or electron capture devices.

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10. A general industrial license means a registration of the use of a material, source, or device generally licensed pursuant to R12-1-305 or R12-1-306, except R12-1-305(B), R12-1-306(D), or R12-1-306(E).
 11. An industrial radiography class A license is a specific category C license which authorizes industrial radiography using sealed radioisotope sources at specific facilities identified in the license conditions or at temporary field job sites.
 12. An industrial radiography class B license is a specific category C license which authorizes industrial radiography using sealed radioisotope sources only at specific facilities identified in the license conditions.
 13. An open field irradiator license is a specific category C license authorizing the use of radioisotopes in the form of sealed sources not permanently mounted within a shielding container, for irradiation of materials.
 14. A self-shielded irradiator license is a specific category C license authorizing the use of radioisotopes in the form of sealed sources for irradiation of materials in a shielding device from which the sources are not removed during irradiation. The Agency may combine a self-shielded irradiator license with any broad license.
 15. A well logging license is a specific category C license which authorizes the use of radioactive material in sealed or unsealed sources for wireline services or field tracer studies.
 16. A research and development license is a specific category C license which authorizes a licensee to utilize radioactive material in unsealed and sealed form for industrial, scientific, or biomedical research, not including administration of radiation or radioactive material to human beings.
 17. A laboratory license is a specific category C license which authorizes a licensee to perform specific in-vitro or in-vivo medical or veterinary testing, while possessing quantities of radioactive material greater than the general license quantities authorized in R12-1-306.
- D.** Category D licenses are the following specific radioactive material licenses. Except for type D4, general industrial; type D5, depleted uranium; type D8 and D9, health physics; and type D14, additional facilities licenses, the Agency shall not combine a category D license with any other license.
1. A distribution license is one which authorizes the commercial distribution of radioactive materials or radioisotopes in products to persons holding an appropriate general or specific license. The Agency shall ensure that a distribution license does not:
 - a. Authorize distribution of radiopharmaceuticals or distribution to persons exempt from regulatory control, or
 - b. Authorize any other use of the radioactive material. An appropriate category C license is required for possession of radioisotopes and their incorporation into products.
 2. A nuclear pharmacy license is one which authorizes the preparation, compounding, packaging, or dispensing of radiopharmaceuticals for use by other licensees.
 3. A nuclear laundry license is one authorizing the collection and cleaning of items contaminated with radioactive materials.
 4. A general industrial license is a registration of a gauging device in accordance with R12-1-306(A). The Agency may combine a general industrial license with a Class A, B, or C broad industrial, limited industrial, portable gauge, or Class A or B fixed gauge license.
 5. A depleted uranium general license is a registration of the use of the general license authorized pursuant to R12-1-305(C) or the use of depleted uranium as a concentrated mass or as shielding for another radiation source within a device or machine. The Agency may combine a depleted uranium general license with a medical teletherapy; Class A, B, or C broad industrial; portable gauge; Class A or B fixed gauge; Class A or B industrial radiography; or self-shielded irradiator license. For registration purposes an applicant shall follow the registration instructions in R12-1-305(C).
 6. A veterinary medicine license is one which authorizes the use of radioactive materials for specific applications in veterinary medicine as authorized in the license.
 7. A general veterinary medicine license is a registration of the use of the general license authorized in R12-1-306(E) in veterinary medicine.
 8. A health physics class A license is one which authorizes the use of radioactive materials for performing instrument calibrations, processing leak test or environmental samples, or providing radiation dosimetry services.
 9. A health physics class B license is one which authorizes only the collection, possession, and transfer of radioactive materials in the form of leak test samples for processing by others.
 10. A secondary uranium recovery license is one which authorizes the extraction of natural uranium or thorium from an ore stream or tailing which is being or has been processed primarily for the extraction of another mineral. The Agency shall not combine a secondary uranium recovery license with any other license.
 11. A low-level, radioactive waste disposal facility license is a license that is issued for a "disposal facility," as that term is used in R12-1-439 and R12-1-442, which has a closure or long-term care plan and is constructed and operated according to the requirements in 10 CFR 61, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 12. A waste processor class A license is one authorizing the incineration, compaction, repackaging, or any other treatment or processing of low-level radioactive waste prior to transfer to another person authorized to receive or dispose of the waste. The Agency shall not combine a waste processor class A license with any other license.
 13. A waste processor class B license is one which authorizes a waste broker to receive prepackaged, low-level radioactive waste from other licensees; combine the waste into shipments; and transfer the waste without treating or processing the waste in any manner and without repackaging except to place damaged or leaking packages into over-packs. The Agency shall not combine a waste processor class B license with any other license.
 14. An additional facility license is an endorsement, by license condition to an existing specific license, authorizing one or more additional separate facilities where radioactive material may be stored or used for a period exceeding six months.
 15. A possession-only license is a license of any other category which authorizes only the possession in storage, but no use of, the authorized materials. A license which has been suspended as an enforcement action is not considered a possession-only license.
 16. A reciprocal license is the registration of the general license authorized by R12-1-320. This license is subject

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to a special fee as provided by R12-1-1307 but is exempt from annual fees.

17. Reserved
 18. An "unclassified" radioactive material license is one authorizing radioisotopes, physical or chemical forms, possession limits, or uses not included in any other type of license specified in this Section.
 19. A NORM commercial disposal site license is one that authorizes the receipt of waste material contaminated with naturally occurring radioactive material from other licensees for permanent disposal, provided the concentration of the radioactive material does not exceed 74kBq (2,000 picocuries)/gram.
- E.** Category E registrations are those that register the possession of x-ray machine(s) under 12 A.A.C. 1, Article 2. The Agency shall not combine Category E registrations with any other registration.
1. An X-ray machine class A registration is one authorizing the possession of X-ray machines in a hospital or other facility offering inpatient care.
 2. An X-ray machine class B registration is one authorizing the possession of X-ray machines in a medical, osteopathic, or chiropractic office or clinic not offering inpatient care; or the possession of X-ray machines in a school, college, university, or other teaching facility.
 3. An X-ray machine class C registration is one authorizing the possession of X-ray machines in dental, podiatry, and veterinarian offices or clinics.
 4. An industrial radiation machine registration is one authorizing the possession of X-ray machines, or the possession of particle accelerators not capable of producing a high radiation area, in a nonmedical facility.
 5. An accelerator facility registration is one authorizing the possession and operation of one or more particle accelerators of any kind capable of accelerating any particle and producing a high radiation area.
 6. A radiation machine, "other," is one authorizing possession or use of an ionizing radiation machine not included in any other category specified in subsection (E).
- F.** Category F registrations are those that register nonionizing radiation producing sources regulated under 12 A.A.C. 1, Article 14. The Agency shall not combine Category F registrations with any other registration categories that have a difference in fee per unit.
1. A tanning registration authorizes the commercial operation of any number of tanning booths, beds, cabinets, or other devices in a single establishment.
 2. A Class A laser registration authorizes the operation of one to 10 laser devices subject to R12-1-1433.
 3. A Class B laser registration authorizes the operation of 11 to 49 laser devices subject to R12-1-1433.
 4. A Class C laser registration authorizes operation of 50 or more laser devices subject to R12-1-1433.
 5. A laser light show registration authorizes the operation of a laser device subject to R12-1-1441.
 6. A medical laser registration authorizes the operation of one or more laser devices subject to R12-1-1440.
 7. A Class II surgical device registration authorizes the operation of one or more Class II surgical devices subject to R12-1-1438. A device is designated as a Class II surgical device by the USFDA and is labeled as such by the manufacturer.
 8. A medical radiofrequency device registration authorizes the operation of one or more medical radiofrequency devices.
 9. A class A industrial radiofrequency device registration authorizes the operation of one to five radiofrequency heat sealers or industrial microwave ovens.
 10. A class B industrial radiofrequency device registration authorizes the operation of six to 20 radiofrequency heat sealers or industrial microwave ovens.
 11. A class C industrial radiofrequency device registration authorizes the operation more than 20 radiofrequency heat sealers or industrial microwave ovens.
 12. A class A medical radiofrequency device registration authorizes the operation of one or two radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 13. A class B medical radiofrequency device registration authorizes the operation of three to nine radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 14. A class C medical radiofrequency device registration authorizes the operation of 10 to 19 radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 15. A class D medical radiofrequency device registration authorizes the operation of 20 or more radiofrequency diathermy or electrocoagulation units not used in non-ionizing cosmetic procedures.
 16. An "other" nonionizing radiation device authorizes the operation of a nonionizing radiation device or other device not included in any other category specified in subsection (F).

Historical Note

Adopted effective November 19, 1982 (Supp. 82-6).
 Amended effective November 28, 1983 (Supp. 83-6).
 Section repealed, new Section adopted effective November 5, 1993 (Supp. 93-4). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).
 Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).
 Amended by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4).
 Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4). Amended by final rulemaking at 21 A.A.R. 289, effective April 6, 2015 (Supp. 15-1). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1303. Fee for Initial License and Initial Registration

An applicant shall remit for a new license or new registration the appropriate fee as prescribed in R12-1-1306.

Historical Note

Adopted effective November 19, 1982 (Supp. 82-6).
 Amended effective November 28, 1983 (Supp. 83-6).
 Amended subsections (A), (C), and (D) effective November 28, 1986 (Supp. 86-6). Section repealed, new Section adopted effective November 5, 1993 (Supp. 93-4).
 Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1304. Annual Fees for Licenses and Registrations

A. Each license or registration issued by the Agency shall identify the category by a letter and number corresponding to the

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appropriate subsection of R12-1-1302 or category type listed in R12-1-1306.

- B. Except for types D16 and D17, each licensee or registrant shall submit payment of the annual fee in the amount prescribed in R12-1-1306(A) on or before January 1 of each year. This single annual fee will cover any and all renewals, amendments, and regular inspections of the license during the forthcoming calendar year.
C. If a licensee or registrant fails to pay the annual fee by January 1, the license is not current.
D. If a licensee or registrant fails to pay the annual fee by April 1, the Agency shall apply administrative sanction provisions of 12 A.A.C. 1, Article 12.
E. A licensee who is required to pay an annual fee under this Article may qualify as a small entity. If a licensee qualifies as a small entity and provides the Agency with proper certification along with its annual fee payment, the licensee may pay reduced annual fees as shown in Table 1 to this Article. Failure to file a small entity certification in a timely manner may result in the denial of any refund.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1305. Method of Payment

- A. An applicant licensee or registrant shall pay fees by check or money order, payable to the "State of Arizona" at the address shown on the application, license, registration, or renewal notice.
B. Once a license or registration has been issued, no portion of the application fee or any annual fee will be refunded.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

R12-1-1306. Table of Fees

- A. The application and annual fee for each category and type are shown in Table 13-1.

Table 13-1

Table with 3 columns: Category, Type, Annual fee. Lists various categories from A1 to C10 with their corresponding annual fees.

Table with 2 columns: Category, Fee. Lists various categories from C11 to F16 with their corresponding fees, including industrial radiography, nuclear pharmacy, and X-ray machines.

Notes: (1) An additional 30% of the annual base fee is added to the annual base fee for each additional site.

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- (2) The fee is 50% of the annual base fee for the category under which the radioactive material will be stored.
- (3) See R12-1-1307.

- B.** The application fee for a licensee or registrant is the annual fee as shown in R12-1-1306. "Full Cost" is based on professional personnel time for preparation, travel, onsite inspection, any reports, review of findings, and preparation of the license or registration or denial charged at \$99 per hour and mileage charged at 44.5¢ per mile. The Agency shall assess the licensee or registrant 90% of the estimated full cost of issuing the license or registration. The Agency will assess for any remaining costs when it is prepared to issue the license, registration, denial, or if Agency costs for the requested activity exceed \$10,000.
- C.** The annual fee for a licensee or registrant for which the scheduled fee is "Full Cost" is based on professional personnel time for preparation, travel, onsite inspection, preparation of reports, review of findings, and preparation for any inspections or completion of any amendments to the license, registration or denials charged at \$99 per hour and mileage charged at 44.5¢ per mile for the preceding 12 months.

Historical Note

Amended effective November 5, 1993 (Supp. 93-4). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 12 A.A.R. 75, effective February 7, 2006 (Supp. 05-4). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4). Amended by final rulemaking at 21 A.A.R. 289, effective April 6, 2015 (Supp. 15-1).

R12-1-1307. Special License Fees

- A.** The fee for a Type D16 license providing reciprocal recognition under R12-1-320 of a radioactive materials license issued by the U.S. NRC or another state is half of the annual fee for an Arizona license of the appropriate type. The fee is due and payable at the time reciprocity is requested, and the general license does not become current until the fee is paid.
- B.** For a low-level radioactive waste disposal site the initial application fee is \$6,000,000. The annual fee for the second through fifth years is \$6,000,000. The Agency shall promulgate a new fee rule for years subsequent to year five. Based on data gathered during the first five years, the Agency shall set a reasonable fee after consideration of the following factors:
 - 1. Unrecovered costs which the Agency may charge under A.R.S. § 30-654(B)(18).
 - 2. Actual costs incurred by the Agency.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1308. Fee for Requested Inspections

- A.** A licensee or registrant may request an inspection of its facility at any time. The Agency shall assess the licensee or registrant the full cost of the inspection, based on personnel time for preparation, travel, onsite inspection, review of findings, and preparation of a report, charged at \$99 per hour and mileage charged at 44.5¢ per mile.
- B.** The fee specified in this Section does not apply to:
 - 1. Regular inspections as scheduled by the Agency,

- 2. Enforcement reinspections conducted to ensure the correction of violations or safety hazards, or
- 3. Inspections requested by workers pursuant to R12-1-1007.

Historical Note

Adopted effective November 5, 1993 (Supp. 93-4). Amended by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2). Amended by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

R12-1-1309. Abandonment of License or Registration Application

- A.** Any license or registration application for which the applicant has been provided a written notification of deficiencies in the application and for which the applicant does not make a written attempt to supply the requested information or request an extension in writing within 90 days of the date of the written notice of deficiencies, is considered abandoned and will not be processed.
- B.** If an applicant does not act in the time-frame specified in subsection (A), the applicant shall submit a new application with the appropriate fee.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 1817, effective May 12, 1999 (Supp. 99-2).

Table 1. Small Entity Fees¹

Small Businesses Not Engaged in Manufacturing and Small Not-for-profit Organizations (Gross Annual Receipts, three-year average):	
>\$6.5 million	Pay the fee listed in R12-1-1306
\$350,000 to \$6.5 million	\$2,200
<\$350,000	\$500
Manufacturing Entities that Have an Annual Average of 500 Employees or Less:	
>500 employees	Pay the fee listed in R12-1-1306
35 to 500 employees	\$2,200
<35 employees	\$500
Small Government Jurisdictions (including publicly supported educational institutions) (Population in Jurisdiction):	
>50,000	Pay the fee listed in R12-1-1306
20,000 to 50,000	\$2,200
<20,000	\$500
Educational Institutions that Are Not State or Publicly Supported, and Have 500 Employees or Less:	
>500 employees	Pay the fee listed in R12-1-1306
35 to 500 employees	\$2,200
<35 employees	\$500

- 1. A licensee who seeks to establish status as a small entity for the purpose of paying the annual fees required under R12-1-1304 as shown in R12-1-1306 must file a certification statement with the Agency each year. The licensee must file the required certification on Agency Form 333 for each license under which it was billed. Agency Form 333 can be accessed through the Agency web site at <http://www.azrra.gov>. For licensees who cannot access the Agency web site, Agency Form 333 may be obtained by writing to the Agency or by telephoning the Agency at (602) 255-4845, or by e-mailing the Agency at webcontactform@arrawebsite.com.

Historical Note

New Table made by exempt rulemaking at 14 A.A.R. 4243, effective November 17, 2008 (Supp. 08-4).

ARTICLE 14. REGISTRATION OF NONIONIZING RADIATION SOURCES AND STANDARDS FOR PROTECTION AGAINST NONIONIZING RADIATION

R12-1-1401. Registration of Nonionizing Radiation Sources and Service Providers

- A. A person shall not use a nonexempt nonionizing radiation source, unless the source is registered by the Agency.
- B. A person who possesses a nonexempt nonionizing source shall submit to the Agency an application for registration within 30 days of its first use.
 1. A person who possesses a nonexempt source listed in R12-1-1302(F) shall register the source with the Agency.
 2. A person applying for the registration of a nonexempt source shall use an application form provided by the Agency.
 3. An applicant shall provide the information identified in Appendix B of this Article.
- C. A registrant shall notify the Agency within 30 days of any change to the information contained in the registration, or sale of a source that results in termination of the activities conducted under the registration.
- D. In addition to the application form, an applicant shall remit the applicable registration fee, specified in R12-1-1306.
- E. A person who is operating more than one facility, where one or more nonexempt nonionizing sources are used, shall apply for a separate registration for each facility.
- F. A person in the business of installing or servicing nonexempt nonionizing sources shall apply to the Agency for registration 30 days before furnishing the service. The person shall apply for registration on a form furnished by the Agency and shall provide the information required by A.R.S. § 30-672.01.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). New Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1402. Definitions

General definitions:

“Controlled area” means any area to which human access is restricted for the purpose of protection from nonionizing radiation.

“Direct supervision” means that a licensed practitioner supervises the use of a source for medical purposes while the practitioner is present inside the facility where the source is being used.

“Indirect supervision” means: for lasers or IPL devices used for hair removal procedures, there is at a minimum, responsible supervision and control by a licensed practitioner who is easily accessible by telecommunication.

“Licensed practitioner” (See R12-1-102)

“Medical director” means a licensed practitioner, as defined in R12-1-102, who delegates a laser, IPL, or other light-emitting medical device procedure to a non-physician and is qualified to perform the procedure within the scope of practice of the license.

“Nonexempt nonionizing source” means any system or device that contains a nonionizing source listed in R12-1-1302(F).

“Operator” means a person who is trained in accordance with this Article and knowledgeable about the control and function of a nonionizing device regulated under this Article.

“Other cosmetic procedure” means a method of using medical lasers or intense pulse light (IPL) devices approved by the Federal Food and Drug Administration (FDA), for the cosmetic purpose of spider vein removal, skin rejuvenation, non-

ablative skin resurfacing, skin resurfacing, port wine stain removal, epidermal pigmented skin lesion removal, or tattoo removal; and does not include hair removal.

Laser definitions:

“Accessible emission limit (AEL)” means the maximum accessible emission level of laser or collateral radiation permitted within a particular class.

“Accessible radiation” means laser or collateral radiation to which human access is possible.

“Angular subtense” means the apparent visual angle, α , as calculated from the source size and distance from the eye.

“Aperture” means an opening in the protective housing or other enclosure of a laser product, through which laser or collateral radiation is emitted, allowing human access to the radiation.

“Aperture stop” means an opening serving to limit the size and to define the shape of the area over which radiation is measured.

“Certified laser product” means that the product is certified by a manufacturer in accordance with the requirements of 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“CDRH” means the Center for Devices and Radiological Health.

“Classes of lasers” means the following categories of lasers, defined in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency: Class 1, Class 2, Class 2a, Class 3, Class 3a, Class 3b, and Class 4. This incorporation by reference contains no future editions or amendments.

“Collateral radiation” means any electronic product radiation, except laser radiation, emitted by a laser product as a result of operation of the laser or any component of the laser product that is physically necessary for operation of the laser. The accessible emission limits for collateral radiation are specified in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Continuous wave” (cw) means the output of a laser that is operated in a continuous rather than a pulsed mode. For purposes of this Article, a laser operating with a continuous output for a period ≥ 0.25 seconds, is regarded as a cw laser.

“Cosmetic procedure protocol” means a delegated written authorization to select specific laser or IPL settings, initiate a laser or IPL procedure, and conduct necessary follow-up procedures.

“Demonstration laser” means any laser manufactured, designed, intended, or used for purposes of demonstration, entertainment, advertising display, or artistic composition.

“Embedded laser” means an enclosed laser with an assigned class number higher than the inherent capability of the laser system in which it is incorporated, where the system’s lower classification is due to engineering features that limit accessible emission.

“Enclosed laser” means a laser that is contained within its own protective housing or the protective housing of a laser or laser system in which it is incorporated. Opening or removing the protective housing provides more access to laser radiation above the applicable MPE than is possible with the protective

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housing in place. (An embedded laser is a type of enclosed laser.)

“Federal performance standards for light-emitting products” means the regulations in 21CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives, and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Human access” means the capacity to intercept laser or collateral radiation by any part of the human body.

“Incident” means an event or occurrence that results in actual or suspected accidental exposure to laser radiation that has caused or is likely to cause biological damage.

“Integrated radiance” means radiant energy per unit area of a radiating surface per unit solid angle of emission, expressed in joules per square centimeter per steradian.

“Irradiance” means the time-averaged radiant power incident on an element of a surface divided by the area of that element, expressed in watts per square centimeter.

“Laser” See the definition in Article 1.

“Laser energy source” means any device intended for use in conjunction with a laser to supply energy for the operation of the laser. General energy sources, such as electrical supply mains or batteries, are not considered laser energy sources by the Agency.

“Laser facility” means a facility where one or more lasers are used. For purposes of this definition a Class 1 facility is a facility that has one or more Class 1 lasers; a Class 2 facility is a facility that has one or more Class 2 or 2a lasers; a Class 3 facility is a facility that has one or more Class 3, 3a, or 3b lasers, and a Class 4 facility is a facility that has one or more Class 4 lasers. Facilities that contain more than one laser class are classified according to the highest laser class in use at the facility.

“Laser product” means any manufactured product or assemblage of components that constitutes, incorporates, or is intended to incorporate a laser or laser system. A laser or laser system that is intended for use as a component of an electronic product is itself considered a laser product.

“Laser protective device” means any device used to reduce or prevent exposure of personnel to laser radiation. This includes: protective eyewear, garments, engineering controls, and operational controls.

“Laser radiation” means all electromagnetic radiation emitted by a laser product, within the spectral range specified in the definition of “laser,” which is produced as a result of controlled stimulated emission or that is detectable with radiation so produced through the appropriate aperture stop and within the appropriate solid angle of acceptance.

“Laser Safety Officer (LSO)” - means any individual, qualified by training and experience in the evaluation and control of laser hazards, who is designated by the registrant and has the authority and responsibility to establish and administer the laser radiation protection program for a particular class of facility.

“Laser system” means a laser in combination with an appropriate laser energy source with or without additional incorporated components.

“Limited exposure duration (T_{max})” means an exposure duration that is specifically limited by design or intended use.

“Maintenance” means performance of those adjustments or procedures specified in operator information provided by the manufacturer with the laser product, which are to be performed by the operator to ensure the intended performance of

the product. The term does not include operation or service as defined in this Section.

“Maximum permissible exposure (MPE)” means the level of laser radiation to which a person may be exposed without hazardous effect or adverse biological changes in the eye or skin. MPE values for eye and skin exposure are listed in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Medical laser product” means any laser product that is a medical device defined in 21 U.S.C. 321(h) and is manufactured, designed, intended, or promoted for in vivo laser irradiation of any part of the human body for the purpose of: diagnosis, surgery, therapy, or relative positioning of the human body.

“Operation” means the performance of the laser product over the full range of its function. It does not include maintenance or service as defined in this Section.

“Protective housing” means those portions of a laser product that are designed to prevent human access to laser or collateral radiation in excess of the prescribed accessible emission limits under conditions specified in this Article.

“Pulse duration” means the time increment measured between the half-peak-power points at the leading and trailing edges of a pulse.

“Pulse interval” means the period of time between identical points on two successive pulses.

“Radiance” means the time-averaged radiant power per unit area of a radiating surface per unit solid angle of emission, expressed in watts per square centimeter per steradian.

“Radiant energy” means energy emitted, transferred, or received in the form of radiation, expressed in joules.

“Radiant exposure” means the radiant energy incident on an element of a surface divided by the area of that element, expressed in joules per square centimeter.

“Radiant power” means the time-averaged power emitted, transferred, or received in the form of radiation, expressed in watts.

“Rule of nines” means a method for estimating the extent of burns, expressed as a percentage of total body surface. In this method the body is divided into sections of 9 percent or multiples of 9 percent, each: head and neck, 9 percent; anterior trunk, 18 percent; posterior trunk, 18 percent; upper limbs, 18 percent; lower limbs, 36 percent; and genitalia and perineum, 1 percent.

“Safety interlock” means a device associated with the protective housing of a laser product to prevent human access to excessive radiation.

“Sampling interval” means the time interval during which the level of accessible laser or collateral radiation is sampled by a measurement process. The magnitude of the sampling interval in units of seconds is represented by the symbol “t”.

“Secured enclosure” means an area to which casual access is impeded by various means, such as a door secured by a lock, latch, or screws.

“Service” means the performance of those procedures or adjustments described in the manufacturer’s service instructions that may affect any aspect of the product’s performance. The term does not include maintenance or operation as defined in this Section.

“ T_{max} ” See limited exposure duration.

“Uncertified laser product” means any laser that has not been certified in accordance with the requirements of 21CFR 1040.10, April 1, 2004, which is incorporated by reference,

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published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Radio frequency and microwave radiation definitions:

“Accessible emission level” means the level of radio frequency radiation emitted from any source, expressed in terms of power density in milliwatts per square centimeter or electric and magnetic field strength, as applicable, and to which human access is normally possible.

“Far field region” means the area in which locally uniform distribution of electric and magnetic field strengths exists in planes transverse to the direction of propagation. The far field region is presumed to exist at distances greater than $2D^2/\lambda$ from the antenna, where λ is the wavelength and D is the largest antenna aperture dimension.

“Maximum permissible exposure MPE” means the rms and peak electric and magnetic field strengths, their squares, or the plane-wave equivalent power densities associated with these fields and the induced and contact currents to which a person may be exposed without harmful effect and with an acceptable safety factor.

“Near field region” means the area near an antenna in which the electric and magnetic field components vary considerably in strength from point to point. For most antennas the outer boundary of the region is presumed to exist at a distance $\lambda/2\pi$ from the antenna surface, where λ is the wavelength.

“Radio frequency controlled area” means any location to which access is controlled for the purpose of protection from radio frequency radiation.

“Radio frequency source” means a source or system that produces electromagnetic radiation in the radio frequency spectrum.

“Radio frequency radiation” means electromagnetic radiation (including microwave radiation) with frequencies in the range of 0.3 megahertz to 100 gigahertz.

“Root-mean-square (rms)” means the effective value, or the value associated with joule heating, of a periodic electromagnetic wave. The rms is obtained by taking the square root of the mean of the squared value of a function.

“Safety device” means any mechanism incorporated into a radio frequency source that is designed to prevent human access to excessive levels of radio frequency radiation.

Ultraviolet, high intensity light, and intense pulsed light source definitions:

“EPA” means the United States Environmental Protection Agency.

“FDA” means the United States Food and Drug Administration.

“High intensity mercury vapor discharge (HID) lamp” means any lamp, including a mercury vapor or metal halide lamp that incorporates a high-pressure arc discharge tube with a fill that consists primarily of mercury and is contained within an outer envelope, except the tungsten filament self-ballasted mercury vapor lamp.

“Intense pulsed light device (IPL)” means, for purposes of R12-1-1438, any lamp-based device that produces an incoherent, filtered, and intense light.

“Maximum exposure time” means the greatest continuous exposure time interval recommended by the manufacturer of a product.

“Protective sunlamp eyewear” means any device designed to be worn by a user of a product to reduce exposure of the eyes to radiation emitted by the product.

“Sanitize” means treat the surfaces of equipment and devices using an EPA or FDA registered product that provides a speci-

fied concentration of chemicals, for a specified period of time, to reduce the bacterial count, including pathogens, to a safe level.

“Self-extinguishing lamp” means any HID lamp that ceases operation in conformance with the requirements of the performance standard in 21 CFR 1040.30(d), April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

“Sunlamp product” means any electronic product designed to incorporate one or more ultraviolet lamps and intended for irradiation of any part of the living human body, by ultraviolet radiation with wavelengths in air between 200 and 400 nanometers, to induce skin tanning.

“Timer” means any device incorporated into a product that terminates radiation emission after a preset time interval.

“Ultraviolet lamp” means any light source that produces ultraviolet radiation and that is intended for use in any sunlamp product.

“Ultraviolet radiation” means electromagnetic radiation in the wavelength interval from 200 to 400 nanometers in air.

“User” means any member of the public who is provided access to a tanning device in exchange for a fee or other compensation, or any individual who, in exchange for a fee or other compensation, is afforded use of a tanning device as a condition or benefit of membership or access.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4). Amended by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1).

R12-1-1403. General Safety Provisions and Exemptions

- A.** Based on consideration of the following factors, the Agency may waive compliance with specific requirements of this Article:
1. Whether compliance requires product replacement or substantial modification of a product’s current installation, and
 2. Whether the registrant provided information requested by the Agency to determine if there are alternative methods of achieving the same or a greater level of radiation protection.
- B.** The registrant shall:
1. Ensure that any nonionizing source is operated by an individual who is trained and has demonstrated competence in the safe use of the source.
 2. Provide safety rules to each individual who operates a nonionizing radiation source and determine whether the individual is aware of operating restrictions and procedures associated with the safe use of the source.
 3. Make, or cause to be made, any physical radiation surveys required by this Article.
 4. Maintain the following records for three years for Agency review:
 - a. Results of any physical survey or calibration required by this Article;
 - b. Radiation source inventories;
 - c. Maintenance, service, and modification records; and
 - d. Incident reports of known or suspected exposure to nonionizing radiation that exceeds any MPE specified in this Article.

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- C. A registrant shall not operate a nonionizing radiation source unless the source complies with all of the applicable requirements of this Article.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1404. Radio Frequency Equipment

- A. A registrant shall operate a radiation source that emits radio frequency radiation in a radio frequency controlled area, in a manner that will prevent human exposure that exceeds the MPE specified in IEEE Std C95.1-1999, Institute of Electrical and Electronics Engineers Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz, 1999 edition, which is incorporated by reference, published by the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th Street, New York, NY 10017, and on file with the Agency. This incorporation by reference contains no future editions or amendments. The registrant shall post each point of access into a radio frequency controlled area according to R12-1-1406.
- B. If a registrant is required to operate a radio frequency source in a controlled area, the registrant shall employ visual or audible emission indicators that function only during production of radiation.
- C. If a source of radio frequency emissions is physically separate from the source's means of activation by a distance greater than 2 meters, the registrant shall place a visual or an audible emission indicator at the source and the point of activation.
- D. A registrant shall place each visual emission indicator so that the location of the indicator does not require human exposure to radio frequency radiation that exceeds the applicable MPE.
- E. A registrant shall inspect each safety device designed to prevent human exposure to excessive radio frequency radiation for proper operation at intervals that do not exceed one month.
- F. If a machine emits mechanically scanned radio frequency radiation, a registrant shall ensure that the machine cannot, as the

result of scan failure or any other malfunction, cause a change in angular velocity or amplitude, allowing human exposure that exceeds the applicable MPE.

- G. A registrant shall physically secure each radio frequency sources to prevent unauthorized use and tampering.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1405. Radio Frequency Radiation: Maximum Permissible Exposure

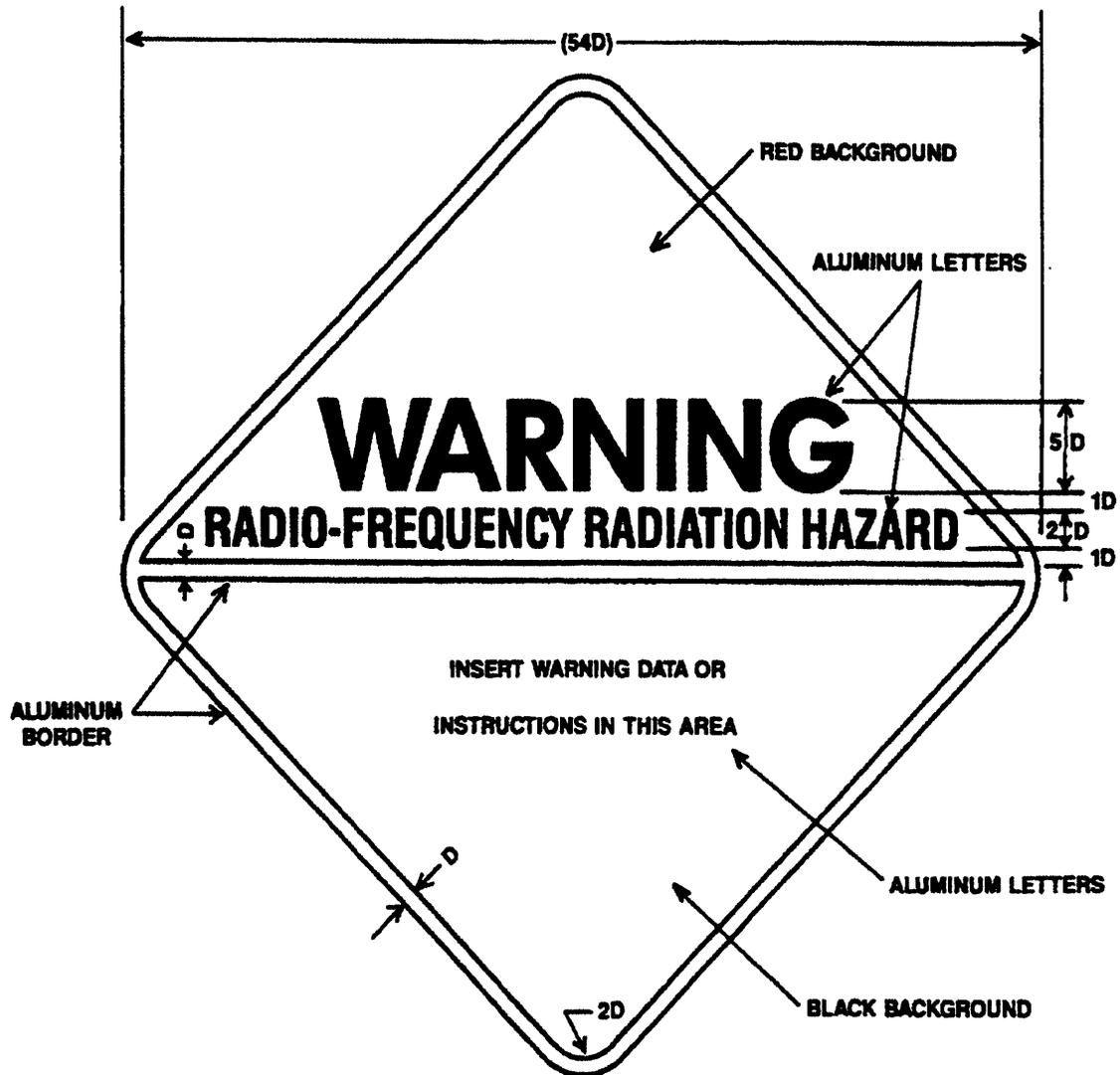
- A. A registrant shall not expose a person to radio frequency radiation that exceeds the applicable MPE specified in IEEE Std C95.1-1999, Institute of Electrical and Electronics Engineers Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz, 1999 edition, which is incorporated by reference, published by the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th Street, New York, NY 10017, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- B. At frequencies between 300 kHz and 100 GHz a registrant may exceed the applicable MPE if exposure conditions can be shown by laboratory procedures to produce specific absorption rates (SARs) above 0.4 watts per kilogram, averaged over the whole body, and spatial peak SAR values above 8 watts per kilogram, averaged over 1 gram of tissue.
- C. At frequencies between 300 kHz and 1 GHz, a registrant may exceed the applicable MPE, if the radio frequency input power to the radiating device is seven watts or less.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1406. Radio Frequency Hazard Caution Signs, Symbols, Labeling, and Posting

- A. A registrant shall post each point of access to a controlled area with caution signs of the type designated in Figure 1.



1. Place handling and mounting instructions on reverse side.
2. D = Scaling unit
3. Lettering: Ratio of letter height to thickness of letter lines.
 - Upper triangle: 5 to 1 Large
6 to 1 Medium
 - Lower triangle: 4 to 1 Large
6 to 1 Medium
4. Symbol is square, triangles are right-angle isosceles.

Fig. 1

- B. A registrant shall post operating procedure restrictions or limitations, used to prevent unnecessary or excessive exposure to radio frequency radiation, in a location visible to the operator.
- C. A registrant shall place each warning sign or label so that an observer is not exposed to radio frequency radiation that exceeds the applicable MPE.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1).

Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

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R12-1-1407. Microwave Ovens

A person shall register with the Agency any microwave oven that does not meet the requirements in 21 CFR 1030.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1408. Reporting of Radio Frequency Radiation Incidents

- A. A registrant shall report in writing to the Agency within 15 days of a known or suspected personnel exposure to radiation that exceeds the applicable MPE incorporated by reference in R12-1-1405.
- B. A registrant shall report to the Agency within 24 hours of a known or suspected personnel exposure to radiation that exceeds 150% of an applicable MPE incorporated by reference in R12-1-1405.
- C. A registrant shall immediately report to the Agency a known or suspected personnel exposure to radiation that exceeds 500% of an applicable MPE incorporated by reference in R12-1-1405.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1409. Medical Surveillance for Workers Who May Be Exposed to Radio Frequency Radiation

- A. Upon request by the Agency, a registrant shall provide a medical examination to an individual exposed to radiation reported to the Agency according to R12-1-1408.
- B. A registrant shall provide a copy of the results to the Agency if an individual undergoes a medical examination, requested under subsection (A).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1410. Radio Frequency Compliance Measurements

- A. For obtaining measurements to determine compliance with R12-1-1405, the Agency shall use an instrument capable of measuring the field strength and frequency of radiation.
- B. The Agency shall ensure that each instrument used for compliance measurements is calibrated every 12 months. The calibration shall be performed in a manner that meets the standards in IEEE Std C95.1-1999, incorporated by reference in R12-1-1404(A).
- C. For compliance measurements of exposure conditions in the near field, the Agency shall obtain measurements of both the electric and magnetic field components. The applicable protection standards for near field measurements are the mean squared electric and magnetic field strengths (using the applicable MPE) referenced in R12-1-1405.
- D. If the Agency is obtaining measurements to determine compliance in far field exposure conditions, the Agency may use measurements of power density in milliwatts per square centimeter or the calculated equivalent plane wave power density,

based on measurement of either the electric or magnetic field strength. The applicable protection standards are the power density values (using the applicable MPE) referenced in R12-1-1405.

- E. In obtaining measurements in accordance with this Section, the Agency shall measure the electric and magnetic field strength:
 1. Obtained at an emission frequency of 300 megahertz or less; and
 2. Expressed in terms of power density.
- F. For mixed or broadband fields at frequencies for which there are different protection standards, the Agency shall determine the fraction of the applicable MPE incurred within each frequency interval. To achieve compliance the sum of all the fractions shall not exceed unity (1).
- G. The Agency shall obtain compliance measurements at a distance of five centimeters or greater from any object.
- H. A registrant shall obtain measurements that are averaged over a six-minute period for pulsed and non-pulsed modes of radio frequency emission and make a correction for duty cycle in determining the average field strength.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1411. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1412. Tanning Operations

A registrant shall establish and maintain written policies and procedures that are part of a radiation safety program to assure compliance with the requirements in R12-1-1412 through R12-1-1416.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1413. Tanning Equipment Standards

- A. A registrant operating a tanning facility shall use sunlamp products that are certified by the manufacturer to comply with 21 CFR 1040.20, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments. For sunlamp products in use before the effective date of this Article, the Agency shall determine compliance based on the standard in effect at the time of manufacture, as shown on the equipment identification label.
- B. A registrant shall replace burned-out or defective lamps or filters, before any use of a tanning device.
- C. A registrant shall replace a burned-out or defective lamp or filter with a lamp or filter intended for use in that equipment, as specified on the sunlamp product label, or that is equivalent to a lamp or filter specified on the sunlamp product label under the FDA regulations and polices applicable to the sunlamp product at the time of manufacture. If an equivalent lamp or filter is used instead of the Original Equipment Manufacturer (OEM) lamp or filter specified on the product label, the regis-

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trant shall maintain a copy of the equivalency certification, provided by the lamp supplier, on file for review by Agency inspectors.

- D.** A registrant shall ensure that each sunlamp product has a timer and control system that complies with 21 CFR 1040.20(c), April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments. In addition the registrant shall ensure that:
1. The timer interval does not exceed the manufacturer's maximum, recommended exposure time;
 2. The timer is functional and accurate to within +/- 10% of the maximum timer interval of the product;
 3. The timer does not automatically reset and cause radiation emission to resume for a period greater than the unused portion of the timer cycle;
 4. The timer is tested annually for accuracy;
 5. For a new facility (including existing facilities with change of ownership) a remote timer control system is installed before operation of sunlamp products. For an existing facility that has sunlamp products not equipped with a remote timer control system, a remote timer control system (outside of the sunlamp product room) is installed no later than 6 months after the effective date of this Section; and
 6. Each sunlamp product is equipped with an emergency shutoff mechanism that allows manual termination of the UV exposure by the user.
- E.** A registrant shall provide physical barriers between each sunlamp product to protect users from injury caused by touching or breaking a lamp.
- F.** A registrant that employs a stand-up sunlamp product shall:
1. Use physical barriers, handrails, floor markings, or other methods to indicate the proper exposure distance between the ultraviolet lamps and the user's skin;
 2. Construct each tanning booth so that it can withstand the stress of use and the impact of a falling person;
 3. Provide access to a tanning booth with doors of rigid construction that open outward, handrails, and non-slip floors; and
 4. Control the interior temperature of a sunlamp product so that it never exceeds 100 degrees Fahrenheit (38 degrees Centigrade).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1414. Tanning Equipment Operators

- A.** A registrant shall ensure that at least one operator is present during operating hours. The operator shall:
1. Limit the occupancy of the tanning room to one person when the tanning equipment is in use;
 2. Prevent use of the tanning equipment by anyone under 18 years of age unless the person has written permission from a parent or guardian;
 3. Limit exposure time to the manufacturer's recommendation on the equipment label or in the operator's manual;
 4. Limit exposure time during a 24-hour period to the maximum recommended for a 24-hour period by the manufacturer; and
 5. Maintain a record of each user's total number of tanning visits and exposure times for Agency inspection. The reg-

istrant shall maintain the records for three years from the date on the record.

- B.** Before use of tanning equipment, an operator shall:
1. Provide the user sanitized protective sunlamp eyewear and directions for its use;
 2. Demonstrate the use of any physical aids, necessary to maintain correct exposure distance for the user, as recommended by the manufacturer of the tanning equipment;
 3. Set the exposure timer so that the user is not exposed to excess radiation;
 4. Instruct the user on the maximum exposure time and correct distance from the radiation source as recommended by the manufacturer of the tanning equipment; and
 5. Instruct the user about the location and correct operation of the emergency shutoff switch.
- C.** An operator shall control a sunlamp's timer. A registrant shall:
1. Provide training to operators that covers:
 - a. The requirements of this Section;
 - b. Facility operating procedures, including:
 - i. Determination of skin type and associated duration of exposure;
 - ii. Procedures for use of minor and adult user consent forms;
 - iii. Potential harm associated with photosensitizing foods, cosmetics, and medications;
 - iv. Requirements for use of protective eyewear by users of the equipment; and
 - v. Proper sanitizing procedures for the facility, equipment, and eyewear;
 - c. The manufacturer's procedures for operation and maintenance of tanning equipment;
 - d. Recognition of injury or overexposure; and
 - e. Emergency procedures used in the case of an injury.
 2. Maintain records of training for Agency review, which include dates and material covered, for three years from the date the training is provided.
 3. Post a list of operators at the facility.
- D.** Before the first use of a tanning facility in each calendar year by a user:
1. An operator shall request that the user read a copy of the warnings in R12-1-1415(A);
 2. The operator shall obtain the user's signature on a statement as an acknowledgment that the user has heard or read and understands the warnings in R12-1-1415(A); and
 3. For illiterate or visually handicapped persons, the operator shall read the warnings in R12-1-1415(A) in the presence of a witness. Both the witness and the operator shall sign the statement described in subsection (D)(2).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1415. Tanning Facility Warning Signs

- A.** A registrant shall post the warning sign shown in this subsection within 1 meter (39.37 inches) of each tanning device, ensuring that the sign is clearly visible and easily viewed by the user before the tanning device is operated.
- B.** A registrant shall post a warning sign, which contains the statement shown, at or near the reception area.
- PERSONS UNDER AGE 18 ARE REQUIRED TO HAVE PARENT OR LEGAL GUARDIAN SIGN AN AUTHORIZATION TO TAN IN THE PRESENCE OF A TANNING FACILITY OPERATOR**

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- C. The lettering on each warning sign shall be at least 10 millimeters high for all words shown in capital letters and at least 5 millimeters high for all lower case letters.

 DANGER - ULTRAVIOLET RADIATION

1. Follow instructions.
2. Avoid overexposure. As with natural sunlight, exposure can cause eye and skin injury and allergic reactions. Repeated exposure may cause premature aging of the skin, dryness, wrinkling, and skin cancer.
3. Wear protective eyewear.

FAILURE TO USE PROTECTIVE EYEWEAR MAY RESULT IN SEVERE BURNS OR LONG TERM INJURY TO THE EYES.

4. Medications or cosmetics may increase your sensitivity to the ultraviolet radiation. Consult a physician before using a sunlamp if you are using medications or have a history of skin problems or believe you are especially sensitive to sunlight.
5. If you do not tan in the sun, you are unlikely to tan from use of this device.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1416. Reporting of Tanning Injuries

- A. A registrant shall report any incident involving an eye injury; skin burn; fall injury, if the fall occurs within the tanning device or while entering or exiting the device; laceration; infection believed to have been transmitted by use of the tanning device; or any other injury reasonably related to the use of the tanning device.
- B. A registrant shall provide a written report of an incident to the Agency within 10 working days of its occurrence or within 10 working days of the date the registrant became aware of the incident.
- C. The report shall include:
 1. The name of the user;
 2. The name and location of the tanning facility;
 3. A description of and the circumstances associated with the injury;
 4. The name and address of the health care provider treating the user, if any; and
 5. Any other information the registrant considers relevant to the incident.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1417. Repealed

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section repealed by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1418. High Intensity Mercury Vapor Discharge (HID) Lamps

A person shall register with the Agency any HID lamp that does not meet the requirements in 21 CFR 1040.30, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1419. Reserved

R12-1-1420. Reserved

R12-1-1421. Laser Safety

- A. The requirements contained in this Section apply to laser products that are used in accordance with the manufacturer's classification and instructions. If certain engineering controls are impractical during manufacture or research and development activities, the LSO shall specify alternate requirements to obtain equivalent laser safety protection.
- B. A registrant shall establish and maintain a laser radiation safety program.
- C. If R12-1-1433 is applicable, a registrant shall conduct a laser radiation protection survey to ensure compliance with R12-1-1433 before initial use, following system modifications, and at intervals that do not exceed six months. During a survey the registrant shall:
 1. Determine whether each laser protective device is labeled correctly, functioning within the design specifications, and meets required standards for the type and class of laser in use;
 2. Determine whether each warning device is functioning within design specifications;
 3. Determine whether each controlled area is identified, controlled, and posted with accurate warning signs in accordance with this Article;
 4. Reevaluate potential hazards from surfaces that are associated with Class 3 and Class 4 beam paths; and
 5. Evaluate the laser and collateral radiation hazard incident to the use of lasers.
- D. The registrant shall maintain records of:
 1. Results of all physical surveys made to determine compliance with this Article;
 2. Any restriction in operating procedures necessary to prevent unnecessary or excessive exposure to laser or collateral radiation;
 3. Any incident for which reporting to the Agency is required pursuant to R12-1-1436;
 4. Results of medical surveillance to determine extent of injury resulting from exposure to laser or collateral radiation;
 5. Inventory to account for all sources of radiation possessed by the licensee.

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- E. A registrant shall provide the Laser Safety Officer with training that covers the subjects listed in Appendix D.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4). Amended by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

R12-1-1422. Laser Protective Devices

- A. A registrant shall ensure that each laser product has a protective housing that prevents access to laser and collateral radiation if it exceeds the exposure limits for Class 1 lasers in R12-1-1426. If a laser's accessible emission levels must exceed the limits for Class 1 lasers, the registrant shall use a laser from the lowest class that will enable the registrant to perform the intended function.
- B. To prevent access to radiation above the applicable MPE, a registrant shall ensure that each laser has a safety interlock, which prevents operation of the laser if a person has removed any portion of the protective housing that can be removed or displaced without the use of tools during normal operation or maintenance. The registrant shall ensure that:
1. Service, testing, or maintenance of a laser does not render the interlocks inoperative or increase radiation outside the protective housing to levels that exceed the applicable MPE, unless a controlled area is established as specified in R12-1-1433;
 2. For pulsed lasers, interlocks are designed to prevent the laser from firing;
 3. For Class 3b and 4 continuous wave (cw) lasers, interlocks turn off the power supply or interrupt the beam.
 4. An interlock does not allow automatic accessibility to radiation emission above the applicable MPE when the interlock is closed; and
 5. Multiple safety interlocks or a means to preclude removal or displacement of the interlocked portion of the protective housing is provided if failure of a single interlock could result in:
 - a. Human access to levels of laser radiation that exceed the radiant power accessible emission limit for Class 3a laser radiation, or
 - b. Laser radiation that exceeds the accessible emission limit for Class 2, emitted directly through the opening created by removal or displacement of a portion of the protective housing.
- C. A registrant shall ensure that a laser with viewing ports, viewing optics, or display screens, included as an integral part of the enclosed laser or laser system has:
1. A suitable means to attenuate laser and collateral radiation transmitted through the optical system to less than the accessible emission limit for collateral radiation required by 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments; and
 2. Specific written administrative procedures developed by the LSO, and use controls, such as interlocks or filters, if there is increased hazard to the eye or skin associated with the use of optical systems such as lenses, telescopes, or microscopes.
- D. A registrant shall ensure that each Class 3 or 4 laser product provides a visual or audible indication before the emission of

accessible laser radiation that exceeds the limits for Class 1, as follows:

1. For Class 3, except for laser products that allow access to less than 5 milliwatts peak visible laser radiation, and Class 4 lasers, the indication occurs before the emission of the radiation and allows enough time for action to avoid exposure;
 2. Any visual indicator is clearly visible through protective eyewear designed specifically for the wavelength of the emitted laser radiation;
 3. If the laser and laser energy source are housed separately and can be operated at a separation distance of greater than 2 meters, both the laser and laser energy source incorporate visual or audible indicators; and
 4. Any visual indicators are positioned so that viewing does not require human access to laser radiation that exceeds the applicable MPE.
- E. In addition to the information signs, symbols, and labels prescribed in R12-1-1427, R12-1-1428, and R12-1-1429, each registrant shall provide, near the signs, symbols, and labels within the laser facility, operating procedure restrictions and any other safety information required to ensure compliance with this Article and minimize exposure to laser and collateral radiation.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Table referenced in subsection (A) was repealed effective January 2, 1996; Section amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1423. Laser Prohibitions

- A. A registrant shall not require or permit an individual to look directly into a laser beam or directly at specular reflections of a laser beam, or align a laser by eye while looking along the axis of the laser beam if the intensity of the beam or the beam's reflections exceeds the applicable MPE.
- B. A registrant shall not permit an individual to enter a controlled area if the skin exposure exceeds the applicable MPE, unless the registrant provides and requires the use of protective clothing, gloves, and shields.
- C. A registrant shall ensure that any laser product, emitting spatially scanned laser radiation, does not, as a result of scan failure or any other failure that causes a change in angular velocity or amplitude, permit human access to laser radiation that exceeds the accessible emission limits applicable to that class of product.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1424. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1425. Laser Product Classification

- A. Each laser product is classified on the basis of emission level, emission duration, and wavelength of accessible laser radiation emitted over the full range of resulting operational capability, any time during the useful life of the product, according to the federal performance standards for light-emitting products contained in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration,

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Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

- B. Any person that modifies a certified laser product in a manner that affects any aspect of performance or intended functions of the product, shall recertify and reidentify the product in accordance with 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- C. Any laser system that is incorporated into a laser product that is subject to the requirements of this Article, and capable, without modification, of producing laser radiation when removed from the laser product, is considered a laser product, subject to the applicable requirements of this Article. Upon removal of the laser system described in this subsection, the laser product is classified on the basis of accessible laser radiation emission.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1426. Laser and Collateral Radiation Exposure Limits

- A. A registrant shall not use, or permit the use of a laser product that will result in a human exposure that exceeds the applicable MPE or accessible emission limit (AEL) listed in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. Accessible emission limits are listed in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. These incorporations by reference contain no future editions or amendments.
- B. A registrant shall not allow exposure to collateral radiation that exceeds any accessible emission limit in 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1427. Laser Caution Signs, Symbols, and Labels

- A. Except as otherwise authorized by the Agency, a registrant shall use signs, symbols, and labels prescribed by this Section and the design and colors specified in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- B. A registrant shall ensure that the word "invisible" immediately precedes the word "radiation" on labels and signs required by this Section for lasers that only produce wavelengths of laser and collateral radiation that are outside of the range of 400 to 710 nanometers.

- C. A registrant shall ensure that the words "visible and invisible" immediately precede the word "radiation" on labels and signs required by this Section for lasers that produce wavelengths of laser and collateral radiation that are both within and outside the range of 400 to 710 nanometers.
- D. A registrant shall position any label placed on lasers or signs posted in laser facilities so that the reader of the label or sign is not exposed to laser or collateral radiation that exceeds the applicable MPE or accessible emission limit while reading the label or sign.
- E. A registrant shall use labels and signs that are clearly visible, legible, and permanently attached to the laser or facility.
- F. A registrant shall ensure that a permanent and legible label is affixed to each laser, identifying the classification of the laser in accordance with 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.
- G. For a Class 3 or Class 4 laser a registrant shall ensure that a permanent and legible label is affixed to each laser, specifying the maximum output of laser radiation, the pulse duration if applicable, and the laser medium or emitted wavelength.
- H. For a Class 3 or Class 4 laser, used in the practice of medicine, a registrant shall ensure that a permanent and legible label is affixed to each laser providing one or more of the following warnings near each aperture that emits laser radiation or collateral radiation that exceeds the applicable MPE, as follows:
 1. "AVOID EXPOSURE - Laser radiation is emitted from this aperture" if the radiation emitted through the aperture is laser radiation;
 2. "AVOID EXPOSURE - Hazardous electromagnetic radiation is emitted from this aperture" if the radiation emitted through the aperture is collateral radiation; or
 3. "AVOID EXPOSURE - Hazardous x-rays are emitted from this aperture" if the radiation emitted through the aperture is collateral x-ray radiation.
- I. A registrant shall ensure that there is a label on each non-interlocked or defeatable interlocked portion of the protective housing or enclosure that permits human access to laser or collateral radiation. The label shall include one or more of the following warnings, as applicable:
 1. For laser radiation that exceeds the applicable accessible emission limit for a Class 1 or Class 2 laser, but does not exceed the applicable accessible emission limit for a Class 3 laser, the warning: "DANGER - Laser radiation when open, AVOID DIRECT EXPOSURE TO THE BEAM."
 2. For laser radiation that exceeds the applicable accessible emission limit for a Class 3 laser, the warning: "DANGER - Laser radiation when open, AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION."
 3. For collateral radiation that exceeds an applicable accessible emission limit:
 - a. If the applicable limit for collateral laser radiation is exceeded, the warning: "CAUTION - Hazardous electromagnetic radiation when open"; and
 - b. If the applicable limit for collateral x-ray radiation is exceeded, the warning: "CAUTION - Hazardous x-ray radiation".
 4. For a protective housing or an enclosure that has a defeatable interlock, the warning "and interlock defeated" in addition to the warnings in subsections (1) through (3).

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Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1428. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1429. Posting of Laser Facilities

Unless other methods are approved by the Agency, a registrant shall post each laser facility in accordance with ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1430. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1431. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1432. Repealed**Historical Note**

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1).

R12-1-1433. Laser Use Areas that are Controlled

- A.** A registrant shall establish a controlled area for a laser if it is possible for a person to be exposed to laser radiation from a Class 3b laser, except a Class 3b laser of less than 5 milliwatts visible peak power, or a Class 4 laser that exceeds the applicable MPE or AEL in R12-1-1426.
- B.** A registrant shall ensure that a controlled area associated with a Class 3b laser is:
1. The responsibility of a LSO;
 2. Posted in accordance with this Article; and
 3. Access controlled by the LSO or a trained, designated representative.
- C.** A registrant shall ensure that a controlled area associated with a Class 4 laser is:
1. The responsibility of a LSO;
 2. Posted in accordance with this Article;
 3. Access controlled by the LSO or a trained, designated representative; and
 4. If an indoor controlled area:
 - a. Equipped with latches, interlocks, or another means of preventing unexpected entry into the controlled area;
 - b. Equipped with a control-disconnect switch, panic button, or an equivalent device for deactivating the laser during an emergency;
 - c. Operated so that the person in charge of the controlled area can momentarily override the safety

interlocks during tests that require continuous operation to provide access to other personnel if there is no optical radiation hazard at the point of entry and the entering personnel are wearing required protective devices; and

- d. Controlled in a way that reduces the transmitted values of laser radiation through optical paths such as windows, to levels at or below the applicable ocular MPE and AEL in R12-1-1426. If a laser beam with an irradiance or radiant-exposure above the applicable MPE or AEL will exit the indoor controlled area (as in the case of exterior atmospheric beam paths), the registrant and the operator are responsible for ensuring that the beam path is limited to controlled air space or controlled ground space.

- D.** If a panel or protective cover is removed or an interlock bypassed for service, testing, or maintenance, a registrant shall establish an accessible controlled area. The registrant, through a LSO or a designated representative, shall comply with laser safety requirements for all potentially-exposed individuals.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1434. Laser Safety Officer (LSO)

- A.** Each registrant shall designate a Laser Safety Officer (LSO).
- B.** The LSO shall administer the laser radiation protection program and shall:
1. Ensure that maintenance or service for Class 3b and Class 4 lasers is performed only by technicians trained to provide the maintenance or service by either the manufacturer's service organization or the registrant;
 2. Approve or reject written service, maintenance, and operating procedures;
 3. Investigate, document, and report all incidents as required by R12-1-1436;
 4. Select protective eyewear as required by R12-1-1435, along with any other protective equipment;
 5. For health care facilities, establish authorization and operating procedures, including preoperative and postoperative checklists, for use by operating room personnel;
 6. Ensure that authorized personnel are trained in the assessment and control of laser hazards;
 7. Select signs, symbols, and labels as required by R12-1-1427;
 8. Perform laser radiation protection surveys as required by R12-1-1421 and R12-1-1441;
 9. Classify or verify the classification of lasers and laser systems used under the LSO's jurisdiction;
 10. Evaluate the hazard of laser use areas, treatment areas, and controlled areas, as required by R12-1-1421(C).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1435. Laser Protective Eyewear

- A.** A registrant shall require that protective eyewear, as specified by the LSO, be worn by an individual who has access to:
1. Class 4 laser radiation; or
 2. Class 3b laser radiation.
- B.** A registrant shall, through the LSO, provide protective eyewear that is:

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1. Marked with a label that indicates the optical density protection afforded for the relevant laser wavelength;
 2. Maintained so that the protective properties of the eyewear are preserved;
 3. Inspected at intervals that do not exceed six months to ensure integrity of the protective properties; and
 4. Removed from service if the protective properties of the eyewear fall below the optical density on the label.
- C. A registrant shall maintain records of protective eyewear maintenance, inspection, and removal from service for five years.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1436. Reporting Laser Incidents

- A. A registrant shall notify the Agency by telephone within 24 hours of any incident that has caused or may have caused:
1. Permanent loss of sight in either eye; or
 2. Third-degree burns of the skin involving more than 5 percent of the body surface as estimated by the rule of nines.
- B. A registrant shall notify the Agency by telephone within five working days of any incident that has or may have caused:
1. Any second-degree burn of the skin larger than one inch (2.54 centimeter) in greatest diameter; or
 2. Any third-degree burn of the skin; or
 3. An eye injury with any potential loss of sight.
- C. Each registrant shall file a written report with the Agency of any known exposure of an individual to laser radiation or collateral radiation within 30 days of its discovery, describing:
1. Each exposure of the individual to laser or collateral radiation that exceeds the applicable MPE; and
 2. Any incident that triggered a notice requirement in subsections (A) or (B).
- D. Each report required by subsection (C) shall describe the extent of exposure to each individual including:
1. An estimate of the individual's exposure;
 2. The level of laser or collateral radiation involved;
 3. The cause of the exposure; and
 4. The corrective steps taken or planned to prevent a recurrence.
- E. A registrant shall not operate or permit the operation of any laser product or system that does not meet the applicable requirements in this Article.

Editor's Note: The tables referenced in subsection (A) were repealed effective January 2, 1996.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1); the tables previously referenced in subsection (A) were repealed effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1437. Special Lasers

A registrant operating a laser system with an unenclosed beam path shall:

1. Conduct an evaluation before operating the laser to determine the expected beam path and the potential hazards from reflective surfaces. Based on the evaluation the registrant shall exclude reflective surfaces from the beam path at all points where the laser radiation exceeds an applicable MPE;

2. Evaluate the stability of the laser platform to determine the constraints placed upon the beam traverse and the extent of the range of control; and
3. Refrain from operating or making a laser ready for operation until the area along all points of the beam path, where the laser radiation will exceed the applicable MPE, is clear of individuals, unless the individuals are wearing the correct protective devices.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1438. Hair Reduction and Other Cosmetic Procedures Using Laser and Intense Pulsed Light

- A. Registration. A person who seeks to perform hair reduction or other cosmetic procedures shall apply for registration of any medical laser or IPL device that is a Class II surgical device, certified as complying with the labeling standards in 21 CFR 801.109, revised April 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. The applicant shall provide all of the following information to the Agency with the application for registration:
1. Documentation demonstrating that the health professional is qualified in accordance with A.R.S. § 32-516 or 32-3233, has 24 hours of didactic training on the subjects listed in Appendix C, and has passed an Agency-approved exam on subjects covered with a minimum grade of 80%;
 2. For any health professional in practice prior to October 1, 2010, proof of 24 hours of training on the subjects listed in Appendix C;
 3. Documentation endorsed by the prescribing health professional, acknowledging responsibility for the minimum level of supervision required for hair reduction procedures as defined in R12-1-1402 under "indirect supervision";
 4. Procedures to ensure that the registrant has a written order from a prescribing health professional before the application of radiation;
 5. If authorized, procedures to ensure that, in the absence of a prescribing health professional at the facility, the registrant has established a method for emergency medical care and assumed legal liability for the service rendered by an indirectly-supervised certified laser technician; and
 6. Documentation that the indirectly-supervised certified laser technician has participated in the supervised training required by A.R.S. § 32-516 or 32-3233.
- B. Hair Reduction Procedures
1. If a registrant is using a medical laser or an IPL device that is a Class II surgical device, certified in accordance with the labeling standards in subsection (A), for hair reduction procedures, the registrant shall:
 - a. Ensure that the device is only used by a health professional described in A.R.S. §§ 32-516(F)(3) and 32-3233(D)(1) or by a certified laser technician who is working under the indirect supervision of a health professional described in A.R.S. §§ 32-516(C)(1) and 32-3233(D) and (H)(1), and
 - b. Ensure that a prescribing health professional purchases or orders the Class II surgical device that will be used for hair reduction procedures.
 2. A registrant shall:

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- a. Not permit an individual to use a medical laser or IPL device for hair reduction procedures unless the individual:
 - i. Completes an approved laser technician didactic training program of at least 40 hours duration. To successfully complete the training program, the individual shall pass a test that consists of at least 50 multiple choice questions on subjects covered with a minimum grade of 80%. The training program shall be provided by an individual who is a health professional acting within the health professional's scope of practice, or a certified laser technician with a minimum of 100 hours of hands-on experience per procedure being taught;
 - ii. Is present in the room for at least 24 hours of hands-on training, conducted by a health professional or a certified laser technician as described in subsection (B)(2)(a)(i);
 - iii. Performs or assists in at least 10 hair reduction procedures; and
 - iv. Has the qualified health professional or qualified supervising certified laser technician certify that the laser technician has completed the training and supervision as described in subsection (B)(2)(a).
 - b. Ensure that the laser technician follows written procedure protocols established by a prescribing health professional; and
 - c. Ensure that the laser technician follows any written order, issued by a prescribing health professional, which describes the specific site of hair reduction.
3. A registrant shall maintain a record of each hair reduction procedure protocol that is approved and signed by a prescribing health professional, and ensure that each protocol is reviewed by a prescribing health professional, at least annually.
 4. A registrant shall:
 - a. Maintain each procedure protocol onsite, and ensure that the protocol contains instructions for the patient concerning follow-up monitoring; and
 - b. Design each protocol to promote the exercise of professional judgment by the laser technician commensurate with the individual's education, experience, and training. The protocol need not describe the exact steps that a qualified laser technician should take with respect to a hair reduction procedure.
 5. A registrant shall require that a prescribing health professional observe the performance of each laser technician during procedures at intervals that do not exceed six months. The registrant shall maintain a record of the observation for three years from the date of the observation.
 6. A registrant shall verify that a health professional is qualified to perform hair reduction procedures by obtaining evidence that the health professional has received relevant training specified in subsection (A)(1) and in physics, safety, surgical techniques, pre-operative and post-operative care and can perform these procedures within the relevant scope of practice, as defined by the health professional's licensing board.
 7. A registrant shall provide radiation safety training to all personnel involved with hair reduction procedures, designing each training program so that it matches an individual's involvement in hair reduction procedures. The registrant shall maintain records of the training program and make them available to the Agency for three years from the date of the program, during and after the individual's period of employment.
- C. Other Cosmetic Procedures**
1. If a registrant is using a medical laser or an IPL device that is a Class II surgical device, certified in accordance with the labeling standards in subsection (A), for other cosmetic procedures, the registrant shall.
 - a. Ensure that the device is only used by a health professional described in A.R.S. §§ 32-516(F)(3) and 32-3233(D)(1) or by a certified laser technician who is directly supervised by a health professional as described in A.R.S. §§ 32-516(C)(2) and 32-3233(D) and (H)(2); and
 - b. Ensure that a prescribing health professional purchases or orders the Class II surgical device that will be used for other cosmetic procedures.
 2. A registrant shall not permit an individual to use a medical laser or IPL device for other cosmetic procedures unless the individual:
 - a. Completes an approved laser technician didactic training program of at least 40 hours duration. To successfully complete the training program the individual shall pass a test that consists of at least 50 multiple choice questions on subjects covered with a minimum grade of 80%. The training program shall be provided by an individual who is a health professional acting within the health professional's scope of practice, or a certified laser technician with a minimum of 100 hours of hands-on experience per procedure being taught;
 - b. Is present in the room for at least 24 hours of hands-on training, conducted by a health professional or a certified laser technician as described in subsection (C)(2)(a); and
 - c. Performs or assists in at least 10 cosmetic procedures governed by subsection (C), for each type of procedure (for example: spider vein reduction, skin rejuvenation, non-ablative skin resurfacing); and
 - d. Has the qualified health professional or qualified supervising certified laser technician certify that the laser technician has completed the training and supervision as described in subsection (C)(2).
 3. A registrant shall maintain a record of each protocol for a cosmetic procedure governed by subsection (C) that is approved and signed by a prescribing health professional, and ensure that each protocol is reviewed by a prescribing health professional, at least annually. The registrant shall:
 - a. Maintain each protocol onsite, and ensure that the protocol contains instructions for the patient concerning follow-up monitoring; and
 - b. Design each protocol to promote the exercise of professional judgment by the laser technician commensurate with the individual's education, experience, and training. The protocol need not describe the exact steps that a qualified laser technician should take with respect to a cosmetic procedure governed by subsection (C).
 4. A registrant shall verify that a health professional is qualified to perform laser, IPL, and related procedures, by obtaining evidence that the health professional has received relevant training specified in subsection (A)(1) and in physics, safety, surgical techniques, pre-operative and post-operative care and can perform these procedures within the relevant scope of practice, as defined by the health professional's licensing board.

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5. A registrant shall provide radiation safety training to all personnel involved with cosmetic procedures governed by subsection (C), designing each training program so that it matches an individual's involvement in each procedure. The registrant shall maintain records of the training program and make them available to the Agency for three years from the date of the program, during and after the individual's period of employment.
- D. Persons governed by this Section shall also comply with other applicable licensing and safety laws.
- E. A laser shall be secured so that the laser cannot be removed from the facility and the on/off switch is turned to the "off" position with the key removed when a certified laser technician or a health professional is not present in the room where the laser is located.
9. Acquired Adult Hemangioma Reduction,
10. Facial Erythema Reduction,
11. Solar Lentigo Reduction (Age Spots),
12. Ephelis Reduction (Freckles),
13. Acne Scar Reduction,
14. Photo Facial, or
15. Additional procedures as approved by the Agency after consultation with other health professional boards as defined in A.R.S. §§ 32-516(F)(3) or 32-3233(D)(1).
- G. For any application relating to the certification of laser technicians, as described in A.R.S. § 41-1072, there is an administrative completeness review time-frame of 30 days and a substantive review time-frame of 30 days with an overall time-frame of 60 days.
- H. Certified laser technicians shall display a valid original certificate as issued by the Agency in a location that is viewable by the public.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). New Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (05-1). Amended by final rulemaking at 16 A.A.R. 1703, effective August 10, 2010; Manifest typographical errors corrected at the request of the Agency, filed August 31, 2010, file no. M10-342 (Supp. 10-3).

R12-1-1438.01. Certification and Revocation of Laser Technician Certificate

- A. An applicant for a laser technician certificate shall submit a completed application and certification that the applicant has received the training specified in A.R.S. §§ 32-516(A) or 32-3233(E).
- B. The applicant shall pay a nonrefundable fee of \$30.00. A duplicate certificate may be requested at the time of initial application or renewal at a fee of \$10.00 per certificate. To obtain a duplicate certificate at other times a laser technician shall pay \$20.00 per certificate.
- C. Initial certificates are issued for 12 months and expire on the last day of the month. A renewal application shall be accompanied by a renewal fee of \$30.00 each year in addition to \$10.00 per duplicate certificate requested.
- D. Under A.R.S. § 32-3233(I) and (J), the Agency may take appropriate disciplinary action, including revocation of the certificate of a certified laser technician. The Agency may discipline a certified laser technician who has had a relevant professional license suspended or revoked, or been otherwise disciplined by a health professional board or the Board of Cosmetology. The Agency may also discipline the certified laser technician for falsifying documentation related to training, prescriptions, or other required documentation. As provided in Article 12 of this Chapter, the Agency may assess civil penalties, suspend, revoke, deny, or put on probation a certified laser technician.
- E. A laser technician who has been using laser and IPL devices prior to November 24, 2009 may continue to do so if the technician applies for and receives a certificate from the Agency before October 1, 2010.
- F. Certification may be issued for one or more of the following procedures:
 1. Hair Reduction,
 2. Skin Rejuvenation,
 3. Non-Ablative Skin Resurfacing,
 4. Spider Vein Reduction,
 5. Skin Tightening,
 6. Wrinkle Reduction,
 7. Laser Peel,
 8. Telangiectasia Reduction,

Historical Note

New Section made by final rulemaking at 16 A.A.R. 1703, effective August 10, 2010 (Supp. 10-3).

R12-1-1439. Laser and IPL Laser Technician and Laser Safety Training Programs

- A. A person seeking to initiate a medical laser or IPL laser technician training program shall submit an application to the Agency for certification that contains a description of the training program. In addition, the person shall submit a syllabus and a test that consists of at least 50 multiple choice questions on subjects covered. In the program materials, the person shall address the subjects in R12-1-1438 through this Section, and Appendix C.
- B. The Agency shall review the application and other documents required by subsections (A) and (E) in a timely manner, using an administrative completeness review time-frame of 40 days and a substantive review time-frame of 20 days with an overall time-frame of 60 days.
- C. The Agency shall maintain a list of certified laser or IPL training programs.
- D. Applicants for approval as a certified laser or IPL training program shall pay a nonrefundable \$100.00 fee.
- E. Initial certification shall be issued for 12 months and shall expire on the last day of the month. A renewal application shall be accompanied by a renewal fee of \$100.00 each year.
- F. A person seeking to initiate a medical laser or IPL laser technician safety training program shall submit an application to the Agency for certification that contains a description of the training program. In addition, the person shall submit a syllabus and a test that consists of at least 50 multiple choice questions on subjects covered. In the program materials, the person shall address the subjects in R12-1-1421 through R12-1-1444, Appendix C, and Appendix D, with emphasis on personal and public safety. The program shall also contain the training required by A.R.S. § 32-3233(E) or clearly state the portions of the training that are not provided or met if didactic certification is to take place in another program. The applicant shall conduct training in accordance with the program submitted to the Agency and certified by the Agency.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1). Amended by final rulemaking at 16 A.A.R. 1703, effective August 10, 2010 (Supp. 10-3).

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R12-1-1440. Medical Lasers

- A.** A registrant shall ensure that a Class 3 and Class 4 laser product used in the practice of medicine has a means for measuring the level of laser radiation with an error in measurement of no greater than +20%, when calibrated in accordance with the laser product manufacturer's calibration procedure.
- B.** A registrant shall calibrate a laser used in the practice of medicine according to the manufacturer's specified calibration procedure, at intervals that do not exceed those specified by the manufacturer.
- C.** In a medical facility where several medical disciplines or a number of different practitioners use Class 3b and Class 4 lasers, a registrant shall form a Laser Safety Committee to govern laser activity, establish use criteria, and approve operating procedures, as follows:
1. With regard to membership of the committee the registrant shall include at least one representative of the Nursing staff, the LSO, one management representative, and one representative of each medical discipline that uses the lasers;
 2. The committee shall review actions by the LSO related to hazard evaluation and the monitoring and control of laser hazards; and
 3. The committee shall approve or deny requests by potential operators and ancillary personnel to operate or assist in the operation of a laser under the direction of a licensed practitioner.
- D.** A registrant shall use Class 3b and Class 4 Lasers that have a guard mechanism on the switch to control patient exposure and prevent inadvertent exposure.
- E.** A registrant shall establish a written laser safety training program that provides a thorough understanding of established procedures for each type of laser in use and the medical procedures associated with use of the laser. The registrant shall make program documentation available for Agency review and, at minimum, address all of the following in the documentation:
1. Regulatory requirements and the laser classification system;
 2. Fundamentals of laser operation and the significance of specular and diffuse reflections;
 3. Biological effects of laser radiation on the eye and skin;
 4. Non-beam hazards (for example: electrical, chemical, and reaction by-product hazards) and ionizing radiation hazards (for example: x-rays from power sources and target interactions, if applicable) of lasers; and
 5. Responsibilities of management and employees regarding control measures.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1441. Laser Light Shows and Demonstrations

- A.** Before a conducting laser light show or laser demonstration, a registrant shall provide documentation to the Agency that a variance from 21 CFR 1040.10 has been obtained from the FDA.
- B.** A registrant shall notify the Agency in writing, at least three working days in before a proposed laser light show or demonstration, and include all of the following information:
1. The location, time, and date of the light show or demonstration;
 2. Sketches showing the locations of each laser, operator, performer, laser beam path, viewing screen, wall, mirror

- ball, or any other reflective or diffuse surface that could be hit by or reflect the laser beam;
 3. Scanning beam patterns, scan velocity, and frequency in occupied areas; and
 4. Physical surveys and calculations made to comply with this Article.
- C.** A registrant shall supply any additional information required by the Agency for the safety evaluation of the proposed activity.
- D.** Before an outdoor laser light show, a registrant shall notify the Federal Aviation Administration of the proposed show.
- E.** If a light show or demonstration involves laser radiation emissions outside the spectral range of 400 to 700 nanometers, a registrant shall prevent the emissions from exceeding the applicable Class 1 accessible emission limit.
- F.** If it is likely that an audience member or any operator, performer, or employee will view laser or collateral radiation, a registrant shall prevent the radiation from exceeding the applicable Class 1 accessible emission limit.
- G.** Even if it is unlikely that an individual, including any operator, performer, or employee in the vicinity of a laser light show or demonstration will view or be exposed to laser or collateral radiation, a registrant shall prevent the radiation from exceeding the applicable Class 2 accessible emission limit.
- H.** A registrant shall identify any area where levels of laser radiation exceed the applicable Class 2 accessible emission limit by posting warning signs and using barriers or guards to prevent entry.
- I.** If a registrant uses a scanning device, the registrant shall not use a device which, as a result of scan failure or any other failure, can change its angular velocity or amplitude, permitting audience exposure to laser radiation that exceeds the applicable Class 1 accessible emission limit.
- J.** If a mirror ball is used with a scanning laser, a registrant shall meet the requirements of subsections (F) and (G) when the mirror ball is stationary or during any failure mode that results in a change in the rotational speed of the mirror ball.
- K.** A registrant shall ensure that an operator is at all times directly and personally supervising a laser light show or demonstration, except in cases where the maximum laser power output level is less than 5 milliwatts (all spectral lines) and the laser beam path is located at all times at least 6 meters above any surface upon which an individual in the audience is permitted to stand, and at any point, more than 2.5 meters in lateral separation from any position where an individual in the audience is permitted during the performance.
- L.** A registrant shall prevent laser radiation levels from exceeding the applicable Class 2 accessible emission limit at any point less than three meters above any surface upon which an individual in the audience is permitted to stand and 2.5 meters in lateral separation from any position where an individual in the audience is permitted, unless physical barriers are present that prevent human access to the radiation.
- M.** A registrant shall limit the maximum power output of any laser to a level sufficient to produce the desired effect.
- N.** If a registrant is required to limit output power to a level less than the available power to meet the requirements of this Article, the registrant shall adjust, measure, and record the laser output power before the laser light show or demonstration.
- O.** A registrant shall functionally test and evaluate all safety devices and procedures necessary to comply with this Article after setup, and before a laser light show or demonstration.
- P.** A registrant shall secure a laser system, when not in use, against unauthorized operation or tampering
- Q.** A registrant shall perform laser alignment procedures with the laser output power reduced to the lowest practicable level, and

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ensure that any operator, performer, or other employee wears protective eyewear as necessary to prevent exposure to radiation levels that exceed the applicable MPE. The registrant shall only allow individuals who are performing the alignment be present during alignment procedures.

- R.** A registrant shall not conduct a laser light show or demonstration unless the Agency has specifically exempted the show or demonstration from the requirements of 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective January 2, 1996 (Supp. 96-1). Section repealed; new Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1442. Measurements and Calculations to Determine MPE Limits for Lasers

A registrant shall take measurements to determine MPE values in a manner consistent with the procedures contained in ANSI Z136.1-2000, American National Standard for Safe Use of Lasers, 2000 edition, which is incorporated by reference, published by the Laser Institute of America, 13501 Ingenuity Drive, Suite 128, Orlando, FL 32826, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). New Section made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1443. Laser Compliance Measurement Instruments

A registrant shall ensure that the radiation output measurement is performed with an instrument that is calibrated and designed for use with the laser that is being evaluated for compliance. The registrant shall specify the date of calibration, accuracy of calibration, wavelength range, and power or energy of calibration on a legible, clearly visible label attached to the instrument.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

R12-1-1444. Laser Classification Measurements

- A.** A registrant shall measure accessible emission for classification:
1. Under the operational conditions and procedures that maximize accessible emission levels, including start-up, stabilized operation, and shutdown of the laser or laser facility;
 2. With all controls and adjustments listed in the operating and service instructions adjusted for the maximum accessible emission level of laser radiation that is not expected to be detrimental to the functional integrity of the laser or enclosure;
 3. At points in space to which human access is possible for a given laser configuration. If operations include the defeat of safety interlocks or removal of portions of the protective housing or enclosure, the registrant shall measure accessible emission at points accessible in that configuration;

4. With the measuring instrument detector positioned so that the maximum possible radiation is measured by the instrument; and
5. With the laser coupled to the type of laser energy source specified as compatible by the laser manufacturer and producing the maximum emission of accessible laser radiation.

- B.** A registrant shall perform measurements of accessible emission levels, used to classify laser and collateral radiation in accordance with 21 CFR 1040.10, April 1, 2004, which is incorporated by reference, published by the Office of Federal Register National Archives and Records Administration, Washington, D.C. 20408, and on file with the Agency. This incorporation by reference contains no future editions or amendments.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Section heading amended effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix A. Radio Frequency Devices (Include, but are not limited to, the following)

Dielectric heaters and sealers
 Medical diathermy units
 Radar
 R.F. activated alarm systems
 Sputter devices
 R.F. activated lasers
 Edge gluers
 Industrial microwave ovens and dryers
 Asher-etcher equipment
 R.F. welding equipment
 Medical surgical coagulators

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix B. Application Information

The Agency shall issue a registration if an applicant provides the following information and fee as required in R12-1-1401(D). The Agency shall provide an application form to the applicant with a guide and upon request, assist the applicant to ensure that correct information is provided on the application form.

Name and mailing address of applicant
 Person responsible for radiation safety program
 Type of facility
 Legal structure and ownership
 Radiation source information
 Shielding information
 Equipment operator instructions and restrictions
 Classification of professional in charge
 Type of request: amendment, new, or renewal
 Protection survey results, if applicable
 Radiation Safety Officer name, if applicable
 Laser class and type, if applicable
 Information required by Article 14 for the specific source
 Use location
 Telephone number
 Facility subtype
 Signature of certifying agent
 Equipment identifiers
 Scale drawing
 Physicist name and training, if applicable
 Contact person

Applicable fee listed in Article 13 schedule

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Repealed effective January 2, 1996 (Supp. 96-1). Appendix repealed by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). New appendix made by final rulemaking at 11 A.A.R. 61, effective February 5, 2005 (Supp. 04-4).

Appendix C. Hair Removal and Other Cosmetic Laser or IPL Operator Training Program

1. General Considerations. An applicant shall ensure that:
 - a. The training program is specific to the medical laser or IPL device in use and the clinical procedures to be performed;
 - b. Program content is consistent with facility policy and procedure and applicable federal and state law; and
 - c. The training program addresses hazards associated with laser or IPL device use.
2. Technical Considerations. The applicant's training program shall cover all of the following technical subjects:
 - a. Laser and IPL device descriptions
 - b. Definitions
 - c. Laser and IPL device radiation fundamentals
 - d. Laser mediums, types of lasers, and other light-emitting devices – solid, liquid, gas, and IPL devices
 - e. Biological effects of laser or IPL device light
 - f. Damage mechanisms
 - i. Eye hazard
 - ii. Skin hazard (includes information regarding skin type and skin anatomy)
 - iii. Absorption and wavelength effects
 - iv. Thermal effects
 - g. Photo chemistry
 - h. Criteria for setting the Maximum Permissible Exposure (MPE) for eye and skin associated hazards
 - i. Explosive, electrical, and chemical hazards
 - j. Photosensitive medications
 - k. Fire, ionizing radiation, cryogenic hazards, and other hazards, as applicable
3. Medical Considerations. The applicant's training program shall cover all of the following medical subjects:
 - a. Local anesthesia techniques, including ice, EMLA® cream, and other applicable topical treatments
 - b. Typical laser and IPL device settings for hair removal and cosmetic procedures
 - c. Expected patient response to treatment
 - d. Potential adverse reactions to treatment
 - e. Anatomy and physiology of skin areas to be treated
 - f. Indications and contraindications for use of pigment and vascular-specific lasers for cutaneous procedures
4. General Laser or IPL device safety. The applicant's training program shall cover the following general safety subjects:
 - a. Laser and IPL device classifications
 - b. Control measures (includes information regarding protective equipment)
 - c. Manager and operator responsibilities
 - d. Medical surveillance practices
 - e. Federal and state legal requirements
 - f. Related safety issues

- i. Controlled access
- ii. Plume management
- iii. Equipment testing, aligning, and troubleshooting

Historical Note

New appendix made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

Appendix D. Laser Operator and Laser Safety Officer Training

1. Operators and personnel that work around lasers:
 - a. Fundamentals of laser operation (for example: physical principles, construction, and other basic information)
 - b. Bioeffects of laser radiation on the eye and skin
 - c. Significance of specular and diffuse reflections
 - d. Non-beam hazards of lasers (for example: electrical, chemical, and reaction byproducts)
 - e. Ionizing radiation hazards (includes information regarding x-rays from power sources and target interactions, if applicable)
 - f. Laser and laser system classifications
 - g. Control measures
 - h. Responsibilities of managers and operators
 - i. Medical surveillance practices (if applicable)
 - j. CPR for personnel servicing lasers with exposed high voltages, the capability of producing potentially lethal electrical currents, or both.
2. The LSO or other individual responsible for the safety program, evaluation of hazards, and implementation of control measures, or any others, if directed by management to obtain a thorough knowledge of laser safety:
 - a. The subjects covered in subsection (1)
 - b. Laser terminology
 - c. Laser types, wavelengths, pulse shapes, modes, power and energy
 - d. Basic radiometric units and measurement devices
 - e. MPE levels for eye and skin under all conditions
 - f. Laser hazard evaluations, range equations, and other calculations
3. Technical Considerations
 - a. Laser and IPL device descriptions
 - b. Definitions
 - c. Laser and IPL device radiation fundamentals
 - d. Laser mediums, types of lasers, and other light-emitting devices (includes information regarding diodes and solid, liquid, gas, and IPL devices)
 - e. Biological effects of laser or IPL device light
 - f. Damage mechanisms
 - i. Eye hazard
 - ii. Skin hazard (includes information regarding skin type and skin anatomy)
 - iii. Absorption and wavelength effects
 - iv. Thermal effects
 - g. Photo chemistry
 - h. Photosensitive medications
 - i. Criteria for setting the Maximum Permissible Exposure (MPE) levels for eye and skin associated hazards
 - j. Explosive, electrical, and chemical hazards
 - k. Fire, ionizing radiation, cryogenic hazards, and other hazards as applicable

Historical Note

New appendix made by final rulemaking at 11 A.A.R. 978, effective April 3, 2005 (Supp. 05-1).

ARTICLE 15. TRANSPORTATION**R12-1-1501. Requirement for License**

- A.** A person shall not transport radioactive material or deliver radioactive material to a carrier for transport unless the person is authorized in a general or specific license issued by the Agency or exempt under R12-1-103(A).
- B.** This Article applies to any licensee to transfer licensed material if the licensee delivers that material to a carrier for transport, transports the material outside the site of usage as specified in the license, or transports that material on public highways. No provision of this Article authorizes possession of licensed material.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-1502. Definitions

Terms defined in Article 1 have the same meaning when used in this Article.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1503. Transportation of Licensed Material

Each licensee that transports licensed material outside the site of usage, as specified in an Agency license, or where transport is on public highways, or that delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the U.S. Department of Transportation regulations listed in 10 CFR 71.5, revised January 1, 2008, incorporated by reference and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Repealed effective June 13, 1997 (Supp. 97-2). New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1504. Intrastate Transportation and Storage of Radioactive Materials

- A.** A general license is issued to:
1. Any common or contract carrier not exempt under R12-1-103 to receive, possess, transport, and store radioactive material in the regular course of carriage for others or to store radioactive material incident to the transport activities, provided the transportation or storage is in accordance with applicable requirements for the mode of transport of the U.S. Department of Transportation, 49 CFR 171 through 180, revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
 2. Any private carrier or licensee who transports and stores radioactive material, provided the transportation and storage are in accordance with the requirements applicable to the mode of transport, of the U.S. Department of Transportation,

49 CFR 171 through 180, revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

- B.** Any notification of incidents required under federal regulations in subsection (A) shall also be filed with, or made to, the Agency.
- C.** A person who transports or stores radioactive material according to the general license in this Section is exempt from the requirements of Article 4 and Article 10 of this Chapter to the extent that this Section applies to transportation of the radioactive material.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1505. Storage of Radioactive Material in Transport

- A.** A carrier shall not store, for any period in excess of 72 hours, any package that contains radioactive material bearing a Department of Transportation Yellow II or Yellow III label, unless the radioactive material is stored in an area other than, and not adjacent to, any food storage area or area that is normally occupied by an individual.
- B.** A carrier shall not store a package that contains radioactive material with other hazardous materials, except as authorized by U.S. Department of Transportation regulations in 49 CFR 177.848, revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** Whenever a package containing radioactive material is stored in excess of 48 hours, the storage area shall be conspicuously posted according to the requirements of Article 4.
- D.** When transit is interrupted and storage is required for an extended period, the following requirements apply:
1. When radioactive materials are stored for longer than 48 hours during transit, the carrier shall notify the local fire department and provide the following information:
 - a. Warehouse location and carrier name and telephone number;
 - b. Radionuclide(s);
 - c. Activity per package in curies or becquerels and number of packages;
 - d. Form (solid, metallic, liquid, gas);
 - e. Flammability (if flammable);
 - f. Specific location in warehouse;
 - g. Estimated date of departure;
 - h. Toxicity (if toxic).
 2. If the radioactive material will be, or has been in storage for longer than 90 days, the carrier shall notify the Agency in writing and include the information required in subsection (D)(1).
 3. The licensee or carrier shall immediately notify the Department of Public Safety of an accident involving radioactive material.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

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R12-1-1506. Preparation of Radioactive Material for Transport

A licensee shall not deliver any package that contains radioactive material to a carrier for transport or transport radioactive material, unless the licensee:

1. Complies with the U.S. Department of Transportation packaging, monitoring, manifesting, marking, and labeling regulations applicable to the mode of transport, (Contained in 49 CFR 171 through 180, revised October 1, 2007, or 39 CFR 111.1, revised July 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
2. Establishes procedures for safely opening and closing packages in which radioactive material is transported; and
3. Prior to delivery of a package to a carrier for transport, assures that:
 - a. The package is properly closed, and
 - b. Any special instructions needed to safely open the package are made available to the consignee.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1507. Packaging Quality Assurance

- A. A licensee that transports radioactive material in the course of business or delivers radioactive material to a carrier for transport in a package for which a license, certificate of compliance, or other approval has been issued by the Nuclear Regulatory Commission, or meets the applicable criteria (10 CFR 71, Subpart H, revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), shall establish, maintain, and execute the quality assurance program specified in 10 CFR 71, Subpart H.
- B. In addition to the requirements in subsection (A) for a quality assurance program, a licensee shall verify by procedures such as checking or inspection, that deficiencies or defective material or equipment relative to the shipment of packages containing radioactive material are promptly identified and corrected.
- C. Before the first use of any Type B packaging, a licensee shall obtain approval of its quality assurance program by the Agency.
- D. A licensee shall maintain sufficient written records to demonstrate compliance with the quality assurance program. Records of quality assurance pertaining to the use of a Type B package for shipment of radioactive material shall be maintained for three years after the package is used for a shipment.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1508. Advance Notification of Nuclear Waste Transportation

- A. Prior to the transport of any nuclear waste, as defined in Article 1, outside of the confines of the licensee's facility or other place of use or storage, or prior to the delivery of any nuclear

waste to a carrier for transport, each licensee shall provide advance notification of such transport to the Agency.

- B. Each advance notification required in subsection (A) above shall contain the following information:
 1. The name, address, and telephone number of the shipper, carrier, and receiver of the shipment;
 2. A description of the nuclear waste contained in the shipment as required by 49 CFR 172.202 and 172.203(d) (Revised October 1, 2007, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 3. The point of origin of the shipment and the seven-day period during which departure of the shipment will occur;
 4. The seven-day period during which arrival of the shipment at state boundaries will occur;
 5. The destination of the shipment, and the seven-day period during which arrival of the shipment will occur; and
 6. A point of contact with a telephone number for current shipment information.
- C. The licensee shall make the notification required by subsection (A) in writing to the Agency. A notification delivered by mail must be postmarked at least seven days before the beginning of the seven-day period during which departure of the shipment is estimated to occur. The licensee shall maintain a copy of the notification for one year.
- D. The licensee shall notify the Agency of any changes in shipment plans, including cancellations, rerouting, or rescheduling, provided pursuant to subsection (A). Such notification shall be by telephoning the Agency. The licensee shall maintain for one year a record of the name of the individual contacted.

Historical Note

Adopted effective December 20, 1985 (Supp. 85-6). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 1126, effective May 9, 2003 (Supp. 03-1). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1509. General License: Plutonium-Beryllium Special Form Material

- A. A general license is issued to any licensee of the Agency to transport fissile material in the form of plutonium-beryllium (Pu-Be) special form sealed sources, or to deliver Pu-Be sealed sources to a carrier for transport, if the material is shipped in accordance with this Article. This material must be contained in a Type A package. The Type A package must also meet the DOT requirements of 49 CFR 173.417(a), revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- B. The general license applies only to a licensee who has a quality assurance program approved by the Agency as satisfying the provisions of R12-1-1507.
- C. The general license applies only when a package's contents:
 1. Contain no more than a Type A quantity of radioactive material; and
 2. Contain less than 1000 g of plutonium, provided that: plutonium-239, plutonium-241, or any combination of these radionuclides, constitutes less than 240 g of the total quantity of plutonium in the package.
- D. The general license applies only to packages labeled with a CSI which:
 1. Has been determined in accordance with subsection (E);
 2. Has a value less than or equal to 100; and
 3. For a shipment of multiple packages containing Pu-Be sealed sources, the sum of the CSIs must be less than or

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equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).

E. The value for the CSI must be greater than or equal to the number calculated by the following equation:

1. $CSI=10[(\text{grams of } ^{239}\text{Pu} + \text{grams of } ^{241}\text{Pu})/24]$,
2. The calculated CSI must be rounded up to the first decimal place.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (Supp. 12-3).

R12-1-1510. Packaging

A. A general license is issued to any licensee to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance, or other approval has been issued by the NRC.

1. This general license applies only to a licensee that has a quality assurance program approved by the Agency as satisfying R12-1-1507;
2. This general license applies only to a licensee that:
 - a. Has a copy of the license, certificate of compliance, or other approval of the package, and has the drawings and other documents referenced in the approval relating to the use and maintenance of the packaging and to the actions to be taken before shipment;
 - b. Complies with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of this Article; and
 - c. Before the licensee's first use of the package, submits in writing to the Agency the licensee's name, license number, and the package identification number specified in the package approval.
3. This general license applies only when the package approval authorizes use of the package under this general license.
4. For a Type B or fissile material package, the design of which was approved by NRC before April 1, 1996, the general license is subject to the additional restrictions of subsection (B).

B. Type B packages.

1. A Type B package previously approved by NRC but not designated as B(U) or B(M) in the identification number of the NRC Certificate of Compliance, may be used under the general license of subsection (A) with the following additional conditions:
 - a. Fabrication of the packaging is satisfactorily completed by August 31, 1986, as demonstrated by application of its model number in accordance with 10 CFR 71.85(c) (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - b. A package that is used for a shipment to a location outside the United States is subject to multilateral approval, as defined in 49 CFR 173.403 (Revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
 - c. A serial number that uniquely identifies each package which conforms to the approved design and is assigned to, and legibly and durably marked on, the outside of each package.
 - d. The licensee shall ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that

could significantly reduce the effectiveness of the packaging;

- e. Where the maximum normal operating pressure will exceed 35 kPa (5 lbf/in²) gauge, the licensee shall test the containment system at an internal pressure at least 50 percent higher than the maximum normal operating pressure, to verify the capability of that system to maintain its structural integrity at that pressure; and
2. A Type B(U) package, a Type B(M) package, a low specific activity (LSA) material package or a fissile material package, previously approved by the NRC but without the "-85" designation in the identification number of the NRC certificate of compliance, may be used under the general license of subsection (A) with the following additional conditions:
 - a. Fabrication of the packaging is satisfactorily completed by April 1, 1999 as demonstrated by application of its model number in accordance with 10 CFR 71.85(c) (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - b. A package that is used for a shipment to a location outside the United States is subject to multilateral approval as defined in 49 CFR 173.403 (Revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
 - c. A serial number which uniquely identifies each package which conforms to the approved design and is assigned to, and legibly and durably marked on, the outside of each package.
 3. A licensee may modify the design and authorized contents of a Type B package, or a fissile material package, previously approved by NRC, provided:
 - a. The modifications of a Type B package are not significant with respect to the design, operating characteristics, or safe performance of the containment system, when the package is subjected to the tests specified in 10 CFR 71.71 and 71.73 (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - b. The modifications of a fissile material package are not significant, with respect to the prevention of criticality, when the package is subjected to the tests specified in 10 CFR 71.71 and 71.73 (Revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); and
 - c. The modifications to the package satisfy the requirements of this Section.
 4. The NRC will revise the package identification number to designate previously approved package designs as B(U), B(M), AF, BF, or A as applicable, and with the identification number suffix "-85" after receipt of an application demonstrating that the design meets the requirements of this Section.
 5. For purposes of this Section, package types are defined in 10 CFR 71.4, revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C. A general license is issued to any licensee of the Agency to transport fissile material, or to deliver to a carrier for transport, licensed material in a specification container for fissile mate-

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rial or for a Type B quantity of radioactive material as specified in 49 CFR 173 and 178 (Revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), if the following requirements are met:

1. The licensee shall maintain a quality assurance program approved by the Agency as satisfying R12-1-1507.
2. The licensee shall:
 - a. Maintain a copy of the specification; and
 - b. Comply with the terms and conditions of the specification and the applicable requirements in 10 CFR 71, Subparts A, G, and H, revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
3. The licensee may not use the specification container for a shipment to a location outside the United States, except by multilateral approval, as defined in 49 CFR 173.403, revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
4. The general license applies only when a package's contents:
 - a. Contain no more than a Type A quantity of radioactive material; and
 - b. Contain less than 500 total grams of beryllium, graphite, or hydrogenous material enriched in deuterium.
5. The general license applies only to packages containing fissile material that are labeled with a CSI which:
 - a. Has been determined in accordance with subsection (E);
 - b. Has a value less than or equal to 10; and
 - c. For a shipment of multiple packages containing fissile material, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).
6. The CSI value must meet the following requirements:
 - a. The value for the CSI must be greater than or equal to the number calculated by the following equation: $CSI=10[(\text{grams of } ^{235}\text{U}/X) + (\text{grams of } ^{235}\text{U}/Y) + \text{grams of } ^{235}\text{U}/Z]$;
 - b. The calculated CSI must be rounded up to the first decimal place;
 - c. The values of X, Y, and Z used in the CSI equation must be taken from Tables 71-1 or 71-2 as appropriate located in 10 CFR 71.22, (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
 - d. If Table 71-2 is used to obtain the value of X, then the values for the terms in the equation for uranium-233 and plutonium must be assumed to be zero; and
 - e. Table 71-1 values for X, Y, and Z must be used to determine the CSI if:
 - i. Uranium-233 is present in the package;
 - ii. The mass of plutonium exceeds 1 percent of the mass of uranium-235;
 - iii. The uranium is of unknown uranium-235 enrichment or greater than 24 weight percent enrichment; or
 - iv. Substances having a moderating effectiveness (i.e., an average hydrogen density greater than H₂O) (e.g., certain hydrocarbon oils or plastics)

are present in any form, except as polyethylene used for packing or wrapping.

D. Foreign packaging.

1. A general license is issued to any licensee of the Agency to transport, or to deliver to a carrier for transport, licensed material in a package the design of which has been approved in a foreign national competent authority certificate that has been revalidated by the Federal Department of Transportation as meeting the applicable requirements of 49 CFR 171.12, revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
2. Except as otherwise provided in this Section, the general license applies only to a licensee who has a quality assurance program approved by the Agency as satisfying the applicable provisions of R12-1-1507.
3. This general license applies only to:
 - a. Shipments made to or from locations outside the United States.
 - b. A licensee that:
 - i. Has a copy of the applicable certificate, the revalidation, and the drawings and other documents referenced in the certificate, relating to the use and maintenance of the packaging and to the actions to be taken before shipment; and
 - ii. Complies with the terms and conditions of the certificate and revalidation, and with the applicable requirements in 10 CFR 71, Subparts A, G, and H, revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. With respect to the quality assurance provisions of Subpart H of the regulations, the licensee is exempt from design, construction, and fabrication requirements.

E. Assumptions as to unknown properties. When the isotopic abundance, mass, concentration, degree of irradiation, degree of moderation, or other pertinent property of fissile material in any package is not known, the licensee shall package the fissile material as if the unknown properties have credible values that will cause the maximum neutron multiplication.

F. Routine determination before each shipment of licensed material shall ensure that the package with its contents satisfies the applicable requirements of this Article and of the license. The licensee shall determine that:

1. The package is proper for the contents to be shipped;
2. The package is in unimpaired physical condition except for superficial defects such as marks or dents;
3. Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;
4. Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;
5. Any pressure relief device is operable and set in accordance with written procedures;
6. The package has been loaded and closed in accordance with written procedures;
7. For fissile material, any moderator or neutron absorber, if required, is present and in proper condition;
8. Any structural part of the package that could be used to lift or tie down the package during transport is rendered inoperable for that purpose, unless it satisfies the design requirements of 10 CFR 71.45 (revised January 1, 2010,

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incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);

9. The level of non-fixed (removable) radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable, and within the limits specified in DOT regulations in 49 CFR 173.443 (revised October 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.);
10. External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in 10 CFR 71.47 (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), at any time during transportation; and
11. Accessible package surface temperatures will not exceed the limits specified in 10 CFR 71.43(g) (revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), at any time during transportation.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (12-3).

R12-1-1511. Air Transport of Plutonium

- A. Notwithstanding the provisions of any general licenses and notwithstanding any exemptions stated directly in this Section or included indirectly by citation of 49 CFR 107, and 171 through 180, previously incorporated in this Article, as may be applicable, the licensee shall ensure that plutonium in any form, whether for import, export, or domestic shipment, is not transported by air or delivered to a carrier for air transport unless:
 1. The plutonium is contained in a medical device designed for individual human application; or
 2. The plutonium is contained in a material in which the specific activity is less than or equal to the activity concentration values for Plutonium specified in 10 CFR 71, Appendix A, Table A-2 (Revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.), and in which the radioactivity is essentially uniformly distributed; or
 3. The plutonium is shipped in a single package containing no more than an A2 quantity of plutonium in any isotope or form, and is shipped in accordance with R12-1-1503 and 10 CFR 71.5 (Revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.); or
 4. The plutonium is shipped in a package specifically authorized for the shipment of plutonium by air in the Certificate of Compliance for that package issued by the NRC.
- B. Nothing in subsection (A) is to be interpreted as removing or diminishing the requirements of 10 CFR 73.24, January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C. For a shipment of plutonium by air that is subject to subsection (A)(4), the licensee shall, through special arrangement with the carrier, require compliance with 49 CFR 175.704, revised October 1, 2007, incorporated by reference, and available

under R12-1-101. This U.S. Department of Transportation regulation is applicable to the air transport of plutonium. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1512. Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste

A licensee shall provide advance notification to the Governor, or the Director of the Agency, of the shipment of licensed material as specified in 10 CFR 71.97, revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2). Amended by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1513. Opening Instructions

Before delivery of a package to a carrier for transport, the licensee shall ensure that any special instructions needed to safely open the package have been sent to, or otherwise made available to, the consignee for the consignee's use in accordance with 10 CFR 20.1906(e) revised January 1, 2010, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 1895, effective September 10, 2012 (12-3).

R12-1-1514. Reserved

R12-1-1515. Exemption for Low-level Radioactive Materials
A licensee is exempt from all the requirements of 10 CFR 71 with respect to shipment or carriage of the low-level materials listed in 10 CFR 71.14(a), revised January 1, 2008, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

Appendix A. Repealed**Historical Note**

Adopted effective December 20, 1985 (Supp. 85-6).
Repealed effective June 13, 1997 (Supp. 97-2).

ARTICLE 16. RESERVED**ARTICLE 17. WIRELINE SERVICE OPERATIONS AND SUBSURFACE TRACER STUDIES****R12-1-1701. Definitions**

"Energy compensation source (ECS)" means a small sealed source, with activity that does not exceed 3.7 Mbq (100 microcuries), contained within a logging tool or other tool component.

"Tritium neutron generator target source" means a tritium source contained within a tritium neutron generator tube that produces neutrons for use in well logging applications.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

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R12-1-1702. Agreement with Well Owner or Operator

- A. A licensee that performs wireline service (well logging) with a sealed source shall enter into a written agreement with the employing well owner or operator that identifies the party responsible for complying with each of the following requirements. The responsible party shall:
1. Make a reasonable effort to recover any sealed source that may be lodged in the well;
 2. Not attempt to recover a sealed source in a manner which, in the licensee's opinion, is likely to result in its rupture;
 3. Perform the radiation monitoring required in R12-1-1723(A);
 4. Decontaminate anyone or anything contaminated with licensed material before releasing personnel or equipment from the site or releasing the site for unrestricted use; and
 5. If a source is classified by the Agency as irretrievable after reasonable efforts at recovery, implement the following requirements within 30 days:
 - a. Immobilize the irretrievable well logging source and seal it in place with a cement plug;
 - b. Provide a means to prevent inadvertent intrusion that could damage the source, unless the site is rendered inaccessible to subsequent drilling operations; and
 - c. Mount a permanent identification plaque, constructed of long-lasting material, such as stainless steel, brass, bronze, or Monel, in a conspicuous location adjacent to the well. The responsible party shall ensure that the plaque size is at least 17 cm (7 inches) square and 3 mm (1/8 inch) thick and the following information is written on the plaque:
 - i. The word "CAUTION,"
 - ii. The radiation symbol (the color requirement in R12-1-428(A) does not apply),
 - iii. The date the source was abandoned,
 - iv. The name of the well owner or operator that employed the licensee;
 - v. The well name and identification number or other designation,
 - vi. An identification of each source by radionuclide and quantity of radionuclide,
 - vii. The depth of the source and depth to the top of the plug, and
 - viii. The following warning, "DO NOT RE-ENTER THIS WELL," and
 - d. Notify the Oil and Gas Conservation Commission, Department of Water Resources, or Department of Environmental Quality of the abandoned source, as required by law.
- B. A licensee shall maintain a copy of the agreement at the field station during logging operations. The licensee shall retain a copy of the written agreement for three years after completion of the well logging operation.
- C. A licensee may apply in accordance with A.R.S. § 30-654(B)(13) for Agency approval, on a case-by-case basis, of proposed procedures to abandon an irretrievable well logging source in a manner not otherwise authorized in subsection (A)(5).
- D. A written agreement between the licensee and the well owner or operator is not required if the licensee and the well owner or operator are employed by the same corporation or other business entity. If so, the licensee shall comply with the requirements in subsections (A)(1) through (A)(5).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section

made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1703. Limits on Levels of Radiation

A person in possession of any source of radiation shall transport the source according to 12 A.A.C. 1, Article 15, and use or store the source in a manner that is consistent with the dose limits in 12 A.A.C. 1, Article 4.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1704. Reserved**R12-1-1705. Reserved****R12-1-1706. Reserved****R12-1-1707. Reserved****R12-1-1708. Reserved****R12-1-1709. Reserved****R12-1-1710. Reserved****R12-1-1711. Reserved****R12-1-1712. Storage Precautions**

- A. A person storing or transporting a source of radiation shall place the source in an approved storage container, transport container, or both. The container or combination of containers shall have a lock, or tamper-proof seal for calibration sources, to prevent unauthorized removal of the source and exposure to radiation.
- B. A person storing or transporting a source of radiation shall store the source in a manner that will minimize danger from explosion or fire.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1713. Transportation Precautions

Each licensee shall ensure that transport containers are physically secured in the transporting vehicle to prevent accidental movement, loss, tampering, or unauthorized removal.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 15 A.A.R. 1023, effective August 1, 2009 (Supp. 09-2).

R12-1-1714. Radiation Survey Instruments

- A. A licensee shall maintain at each field station and temporary job site a calibrated and operable radiation survey instrument capable of detecting beta and gamma radiation. The licensee shall ensure that the radiation survey instrument is capable of measuring 1.0 microsievert (0.1 millirem) per hour through 500 microsievert (50 millirem) per hour.
- B. A licensee shall ensure that additional calibrated and operable radiation detection instruments are available as needed and that the instruments are sensitive enough to detect the low radiation and contamination levels that could be encountered if a sealed source is ruptured.
- C. A licensee shall ensure that the radiation survey instrument required in subsection (A) is calibrated
1. At intervals not to exceed six months and after each instrument servicing;
 2. At energies comparable to the energies of the radiation sources used;

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3. For linear scale instruments, at two points located approximately 1/3 and 2/3 of full-scale on each scale or for logarithmic scale instruments, at mid-range of each decade, and at two points of at least one decade; and
 4. So that accuracy within plus or minus 20 percent of the true radiation level can be demonstrated on each scale.
- D. A licensee shall retain calibration records for a period of three years from the date of calibration.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1715. Leak Testing of Sealed Sources

- A. A licensee that uses a sealed source shall ensure that the source is tested for leakage according to subsection (C). The licensee shall maintain a record of leak test results in units of Becquerels (Bq) or microcuries, for inspection by the Agency for three years after the leak test is performed.
- B. A person authorized under R12-1-417(C) shall wipe a sealed source using a leak test kit or a similar method approved by the Agency, NRC, or another Agreement State. The authorized person shall take the wipe sample from the nearest accessible point to the sealed source where contamination might accumulate, and ensure the wipe sample is analyzed for radioactive contamination. The authorized person shall use a method of analysis capable of detecting the presence of 185 Bq (0.005 microcuries) of radioactive material on the test sample.
- C. Test frequency.
1. A licensee shall ensure that each sealed source (except an energy compensation source (ECS)) is tested in accordance with R12-1-417. In the absence of a certificate from a transferor that a test has been performed within six months before transfer, a licensee shall not use the sealed source until it is tested.
 2. A licensee shall ensure that each ECS that is not exempt from testing under subsection (E) is tested at intervals that do not exceed three years. In the absence of a certificate from a transferor that a test has been performed within three years before transfer, a licensee shall not use the ECS until it is tested.
- D. Removal of leaking source from service.
1. If a test conducted according to this Section reveals the presence of 185 Bq (0.005 microcuries) or more of removable radioactive material, a licensee shall remove the sealed source from service immediately and have it decontaminated, repaired, or disposed of by an Agency, NRC, or Agreement State licensee that is authorized to perform these functions. The licensee shall check the equipment associated with the leaking source for radioactive contamination and, if the equipment is contaminated, have it decontaminated or disposed of by an Agency, NRC, or Agreement State licensee that is authorized to perform the chosen function.
 2. A licensee shall submit a report to the Agency, within five days of receiving positive test results. The report shall describe the equipment involved in the leak, the test results, any contamination that resulted from the leaking source, and each corrective action taken up to the date on the report.
- E. The following sealed sources are exempt from the periodic leak test requirements in subsections (A) through (D):
1. Hydrogen-3 (tritium) sources;
 2. Sources that contain licensed material with a half-life of 30 days or less;

3. Sealed sources that contain licensed material in gaseous form;
4. Sources of beta- or gamma-emitting radioactive material with an activity of 3.7 MBq [100 microcuries] or less; and
5. Sources of alpha- or neutron-emitting radioactive material with an activity of 0.37 MBq [10 microcuries] or less.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1716. Inventory

A licensee shall conduct a physical inventory every six months to account for all licensed material received and possessed under the license. The licensee shall maintain records of the inventory for three years from the date of the inventory for inspection by the Agency. The inventory shall indicate the quantity and kind of licensed material, the location of the licensed material, the date of the inventory, and the name of each individual who conducted the inventory. Physical inventory records may be combined with leak test records.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1717. Utilization Records

Each licensee shall maintain records of use for three years from the date of the recorded event, that contain the following information for each source of radiation:

1. Make, model number, and serial number or a description of each source of radiation used;
2. The identity of the well-logging supervisor or the field unit to which the source is assigned;
3. Locations and dates of use; and
4. In the case of tracer materials and radioactive markers, the radionuclide and activity undertaken in a particular well.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1718. Design and Performance Criteria for Sealed Sources

- A. A licensee shall use a sealed source for well logging applications if the sealed source:
1. Is doubly encapsulated;
 2. Contains licensed material in a chemical and physical form that is insoluble and nondispersible; and
 3. Meets the requirements of subsection (B), (C), or (D).
- B. For a sealed source manufactured on or before July 14, 1989, a licensee may use a sealed source in well logging applications that meets the requirements of USASI N5.4-1968, Classification of Sealed Radioactive Sources, available from the American National Standards Institute at 25 West 43rd Street, 4th floor, New York, NY 10036, which is incorporated by reference and on file with the Agency, or the requirements in subsection (C) or (D). This incorporation by reference contains no future editions or amendments.
- C. For a sealed source manufactured after July 14, 1989, a licensee may use a sealed source in well logging applications

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that meets the oil-well logging requirements of ANSI/HPS N43.6-1997, Sealed Radioactive Sources--Classification, available from the American National Standards Institute at 25 West 43rd Street, 4th floor, New York, NY 10036, which is incorporated by reference and on file with the Agency. This incorporation by reference contains no future editions or amendments.

- D.** For a sealed source manufactured after July 14, 1989, a licensee may use a sealed source in well logging applications if the sealed source's prototype has been tested and found to maintain its integrity after each of the following required tests:
1. Temperature. The test source is held at $-40\times C$ for 20 minutes and $600\times C$ for one hour, and then subjected to a thermal shock with a temperature drop from $600\times C$ to $20\times C$ within 15 seconds.
 2. Impact. A 5 kg steel hammer, 2.5 cm in diameter, is dropped from a height of 1 m onto the test source.
 3. Vibration. The test source is subjected to vibration in the 25 Hz to 500 Hz range at 5 g amplitude for 30 minutes.
 4. Puncture. A 1 gram hammer with a pin, 0.3 cm in diameter, is dropped from a height of 1 m onto the test source.
 5. Pressure. The test source is subjected to an external pressure of 1.695×10^7 pascals (24,600 pounds per square inch absolute).
- E.** The requirements in subsections (A), (B), (C), and (D) do not apply to a sealed source that contains licensed material in gaseous form.
- F.** The requirements in subsections (A), (B), (C), and (D) do not apply to an energy compensation source (ECS).

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1719. Labeling

- A.** A licensee shall mark each source, source holder, or logging tool that contains radioactive material with a durable, legible, and clearly visible marking or label, consisting at minimum of the standard radiation caution symbol, without the conventional color requirement, and the following wording:

DANGER (or: CAUTION)
RADIOACTIVE

This labeling is required for each component transported as a separate piece of equipment regardless of size.

- B.** A licensee shall permanently attach to each transport container a durable, legible, and a clearly visible label consisting at minimum, of the standard radiation caution symbol and the following wording:

DANGER (or: CAUTION)
RADIOACTIVE
NOTIFY CIVIL AUTHORITIES (or name of company)

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1720. Inspection, Maintenance, and Opening of a Source or Source Holder

- A.** Each licensee shall visually check source holders, logging tools, and source handling tools for defects before each use to ensure that the equipment is in good working condition and that required labeling is present. If defects are found, the licensee shall remove equipment from service until it is repaired, and make a record listing: date of check, name of

inspector, equipment involved, each defect found, and repairs made. The licensee shall maintain each record for three years after a defect is found.

- B.** Each licensee shall have a program for semiannual visual inspection and routine maintenance of source holders, logging tools, injection tools, source handling tools, storage containers, transport containers, and uranium sinker bars to ensure that the required labeling is legible and that no physical damage is visible. If any defect is found, the licensee shall remove the equipment from service until it is repaired, and make a record listing; date of inspection, equipment involved, inspection and maintenance operations performed, each defect found, and each action taken to correct a defect. The licensee shall maintain each record for three years after a defect is found.
- C.** A licensee shall not remove a sealed source from a source holder or logging tool, or perform maintenance on a sealed source or source holder that contains a sealed source without written permission from the Agency.
- D.** If a sealed source is stuck in the source holder, a licensee shall not perform any operation, such as drilling, cutting, or chiseling, on the source holder unless the licensee is specifically authorized to perform the operation by the Agency.
- E.** The opening, repair, or modification of any sealed source is prohibited, unless authorized by the Agency, NRC, or an Agreement State.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section made by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1721. Training

- A.** A licensee shall not permit an individual to act as a logging supervisor until that person has:
1. Completed training in the subjects outlined in subsection (E);
 2. Received copies of, and instruction in:
 - a. The applicable rules contained in 12 A.A.C. 1;
 - b. The Agency license under which the logging supervisor will perform well logging; and
 - c. The licensee's operating and emergency procedures, required by R12-1-1722;
 3. Completed on-the-job training and demonstrated competence during a field evaluation in the use of licensed materials, remote handling tools, and radiation survey instruments; and
 4. Demonstrated understanding of the requirements in subsections (A)(1) and (A)(2) by successfully completing a written test.
- B.** The licensee shall not permit an individual to act as a logging assistant until that person has:
1. Received instruction in applicable rules of 12 A.A.C. 1;
 2. Received copies of, and instruction in, the licensee's operating and emergency procedures required by R12-1-1722;
 3. Demonstrated understanding of the materials listed in subsections (B)(1) and (B)(2) by successfully completing a written or oral test; and
 4. Received instruction in the use of licensed materials, remote handling tools, and radiation survey instruments that is related to the logging assistant's intended job responsibilities.
- C.** A licensee shall provide a safety training review for logging supervisors and logging assistants at least once during each calendar year. Each logging supervisor and logging assistant

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shall attend a safety training review at least once during the current calendar year.

- D.** A licensee shall maintain a record of each logging supervisor's and logging assistant's initial training and annual safety training review. The training records shall include copies of written tests and dates of oral tests given after the effective date of this Section. The licensee shall maintain the initial training records for three years following termination of employment, and maintain records of each annual safety training review, including a list of subjects covered during the review, for three years.
- E.** A licensee shall provide instruction in the following subjects in the training required by subsection (A)(1):
1. Fundamentals of radiation safety, including:
 - a. Characteristics of radiation;
 - b. Units of radiation dose and quantity of radioactivity;
 - c. Hazards of exposure to radiation;
 - d. Levels of radiation from licensed material;
 - e. Methods of controlling radiation dose (time, distance, and shielding); and
 - f. Radiation safety practices, including prevention of contamination and methods of decontamination;
 2. Radiation detection instruments, including:
 - a. Use, operation, calibration, and limitations of radiation survey instruments;
 - b. Survey techniques; and
 - c. Use of personnel monitoring equipment;
 3. Equipment, including:
 - a. Operation of equipment, including source handling equipment and remote handling tools;
 - b. Storage, control, and disposal of licensed material; and
 - c. Maintenance of equipment;
 4. The requirements of pertinent federal and state law, and
 5. Case histories of accidents in well logging.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1722. Operating and Emergency Procedures

Each licensee shall develop operating and emergency procedures on the following subjects:

1. Procedures designed to prevent individuals from being exposed to radiation in excess of the limits in Article 4 of this Chapter. This subject includes:
 - a. Use of a sealed source in a well without a surface casing for the purposes of protecting a fresh water aquifer, as appropriate;
 - b. Methods employed to minimize exposure from inhalation or ingestion of licensed tracer materials; and
 - c. Methods for minimizing exposure of individuals in the event of an accident;
2. Use of remote handling tools for manipulating a radioactive sealed source or tracer;
3. Methods and occasions for conducting a radiation survey;
4. Methods and occasions for locking and securing a source of radiation;
5. Personnel monitoring and the use of personnel monitoring equipment;
6. Transportation of a source to a temporary job site or field station, including packaging and placing the source of radiation in a vehicle, placarding the vehicle, and securing the source of radiation during transportation;

7. Procedure for notifying the Agency if there is an accident;
8. Maintenance of records;
9. Inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, and injection tools;
10. Procedure required if a sealed source is:
 - a. Lost or lodged downhole; or
 - b. Ruptured, including safeguards to prevent job site and personnel contamination, inhalation; and ingestion
11. Procedures required for picking up, receiving, and opening packages that contain radioactive material; and
12. Procedures required for site and equipment surveys and decontamination following tracer studies.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1723. Personnel Monitoring

- A.** A licensee shall not permit an individual to act as a logging supervisor or logging assistant unless that person wears, at all times during the handling of licensed radioactive materials, a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor.
- B.** A licensee shall assign a personnel dosimeter to each individual, who shall wear the assigned equipment.
- C.** A licensee shall replace film badges at least monthly and replace other personnel dosimeters at least quarterly. After replacement, a licensee shall promptly process each personnel dosimeter.
- D.** A licensee shall provide bioassay services to each individual who uses licensed materials in subsurface tracer studies if required by the license.
- E.** A licensee shall record exposures noted from personnel dosimeters required by subsection (A) and bioassay results and maintain these records for three years after the Agency terminates the radioactive material license.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1724. Radioactive Contamination Control

- A.** If a licensee detects evidence that a sealed source has ruptured or licensed materials have caused contamination, the licensee shall immediately initiate the emergency procedures required by R12-1-1722.
- B.** If contamination results from the use of licensed material in well logging, the licensee shall decontaminate all affected areas, equipment, and personnel.
- C.** During efforts to recover a source lodged in a well, the licensee shall continuously monitor, with a radiation detection instrument that complies with R12-1-1714 or a logging tool with a radiation detector, the well and any circulating fluids from the well to check for contamination resulting from damage to the source.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1725. Uranium Sinker Bars

A licensee may use a uranium sinker bar for a well logging application only if it is legibly impressed with the words "Caution Radioactive-Depleted Uranium" and "Notify Civil Authorities (or company name) if Found."

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1726. Energy Compensation Source

- A. A licensee may use an energy compensation source (ECS) in a logging tool, or other tool component, if the ECS contains a quantity of radioactive material that does not exceed 3.7 MBq (100 microcuries).
- B. If used in a well with a surface casing, an ECS is subject to all Sections of this Article except R12-1-1702, R12-1-1728, and R12-1-1751.
- C. If used in a well logging hole without a surface casing, an ECS is subject to all Sections of this Article.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1727. Neutron Generator Source

- A. A licensee may use a tritium neutron generator source to produce neutrons for well logging applications.
- B. If the activity of a tritium neutron generator source does not exceed 1.11 TBq (30 Curies) and the source is used in a well with a surface casing, the source is subject to all Sections of this Article except R12-1-1702 and R12-1-1751.
- C. If the activity of a neutron generator source is equal to or exceeds 1.11 TBq (30 Curies) or the source is used in a well without a surface casing, the source is subject to all Sections of this Article.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1728. Use of a Sealed Source in a Well Without a Surface Casing

A licensee may use a sealed source in a well without a surface casing if the licensee follows a procedure for reducing the probability that the source will be lodged in the well. The procedure shall be separately approved by the Agency or in a license issued by the Agency, NRC, or another Agreement State.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

R12-1-1729. Reserved**R12-1-1730. Reserved****R12-1-1731. Security**

- A. A logging supervisor shall be physically present at a temporary job site whenever licensed material is being handled or is not stored and locked in a vehicle or storage place. The logging supervisor may leave the job site to obtain assistance if a source becomes lodged in a well.
- B. During well logging, except when a radiation source is below ground or in a shipping or storage container, the logging supervisor or other individual designated by the logging supervisor shall maintain direct surveillance of the operation to prevent unauthorized entry into a restricted area, as defined in R12-1-102.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended

by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1732. Handling tools

The licensee shall provide and require the use of tools that will assure remote handling of sealed sources other than low-activity calibration sources.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2).

R12-1-1733. Subsurface Tracer Studies

- A. Any person who handles radioactive tracer material shall wear protective gloves and other appropriate protective clothing and equipment. Precautions shall be taken to avoid ingestion or inhalation of radioactive material.
- B. A licensee shall not inject radioactive material into potable aquifers without authority granted in a radioactive material license issued by the Agency.
- C. A licensee shall dispose of tracer study waste contaminated with radioactive material in accordance with R12-1-434.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1734. Use of a Sealed Source in a Well Without a Surface Casing and Particle Accelerators

- A. A licensee or registrant may use a sealed source in a well without a surface casing to protect a fresh water aquifer if the licensee follows the correct procedure for reducing the probability that the source will become lodged in the well.
- B. A licensee or registrant shall not begin well logging operations in a well without a surface casing unless the Agency has approved the licensee's procedure for logging in an uncased hole.
- C. A licensee or registrant shall not permit above-ground testing of a particle accelerator, designed for use in well-logging, which results in the production of radiation, unless the area or facility affected is controlled or shielded in a manner consistent with applicable requirements in Article 4 of this Chapter.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1735. Reserved**R12-1-1736. Reserved****R12-1-1737. Reserved****R12-1-1738. Reserved****R12-1-1739. Reserved****R12-1-1740. Reserved****R12-1-1741. Radiation Surveys**

- A. A licensee shall perform and make a record of a radiation survey using instruments or calculations of radiation levels in each area where radioactive material is stored.
- B. A licensee shall make and record a radiation survey using instruments or calculations of radiation levels in occupied positions and on the exterior of each vehicle used to transport radioactive material. The survey or calculation shall include each source of radiation or combination of sources to be transported in the vehicle.
- C. After removal of the sealed source from the logging tool and before departing the job site, a licensee shall ensure that the logging tool detector is energized, or a survey meter is used to

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test the logging tool for contamination. The licensee shall record the test for contamination.

- D.** The licensee shall make and record each survey using an appropriate survey instrument for the radionuclide being used, at the job site or wellhead for each tracer operation, except those using Hydrogen-3, Carbon-14 and Sulfur-35. Each survey shall include measurements of radiation levels before and after each tracer operation.
- E.** Records of surveys conducted according to subsections (A) through (D) shall include the date of each survey, the identification of each individual making the survey, identification of each survey instrument used, each radiation measurement in millirem or microsievert per hour, and an exact description of the location of the survey. A licensee shall retain records of a survey for three years after completion of the survey.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3).

R12-1-1742. Documents and Records Required at Field Stations

Each licensee shall maintain the following documents and records at the field station:

1. A copy of 12 A.A.C. 1;
2. The license, authorizing use of licensed material;
3. Operating and emergency procedures required by R12-1-1722;
4. The record of radiation survey instrument calibrations required by R12-1-1714;
5. The record of leak test results required by R12-1-1715;
6. Physical inventory records required by R12-1-1716;
7. Utilization records required by R12-1-1717;
8. Records of inspection and maintenance required by R12-1-1720;
9. Training records required by R12-1-1721; and
10. Survey records required by R12-1-1741.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1743. Documents and Records Required at Temporary Job Sites

Each licensee that conducts operations at a temporary job site shall maintain the following documents and records at the temporary job site until the well logging operation is completed:

1. Operating and emergency procedures required by R12-1-1722;
2. The most current calibration records for the radiation survey instruments in use at the site required by R12-1-1714;
3. The most current survey records required by R12-1-1741.
4. The shipping papers for transportation of radioactive materials required by license condition; and
5. If operating under reciprocity in accordance with R12-1-320, a copy of the Agency authorization for use of radioactive material in Arizona.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Amended by final rulemaking at 10 A.A.R. 4458, effective December 4, 2004 (Supp. 04-4).

R12-1-1744. Reserved**R12-1-1745. Reserved****R12-1-1746. Reserved****R12-1-1747. Reserved****R12-1-1748. Reserved****R12-1-1749. Reserved****R12-1-1750. Reserved****R12-1-1751. Notification of Incidents and Lost Sources; Abandonment Procedures for Irretrievable Sources**

- A.** If, after making a reasonable effort to recover a sealed source or device that contains radioactive material using methods that are not likely to result in damage or rupture and contamination, a licensee determines that the source or device is lodged in a well, the licensee shall:
1. Immediately notify the Agency by telephone of the circumstances that resulted in the inability to retrieve the source and, if there is no evidence of contamination, obtain the following from the Agency:
 - a. A determination that the source is irretrievable and abandonment is necessary because further efforts to recover the source are likely to result in an immediate threat to public health and safety, and
 - b. An approval to implement abandonment procedures;
 2. Advise the well owner or operator, as applicable, of the abandonment procedures implemented under R12-1-1702(A) and (C); and
 3. Either ensure that abandonment procedures are implemented within 30 days after the Agency classifies the source as irretrievable or request an extension of time if unable to complete abandonment procedures.
- B.** A licensee shall immediately notify the Agency by telephone and subsequently, within 30 days, by confirmatory letter if the licensee knows or has reason to believe that a sealed source has been ruptured or the well has otherwise been contaminated. The letter shall describe the well location, the magnitude and extent of radioactive contamination, the consequences of the rupture, and the efforts planned or initiated to mitigate the consequences.
- C.** A licensee shall notify the Agency of the theft or loss of any radioactive material, radiation overexposure, excessive levels and concentrations of radiation, and incidents as required by R12-1-443, R12-1-444, and R12-1-445.
- D.** A licensee shall, within 30 days after a sealed source has been classified as irretrievable, report in writing to the Agency. The licensee shall send a copy of the report to each state or federal agency that issued permits or otherwise approved of the drilling operation. The report shall contain the following information:
1. Date of occurrence;
 2. A description of the irretrievable well logging source involved, including the name of the radionuclide and its quantity, and the chemical and physical form of the radionuclide;
 3. Surface location and identification of the well;
 4. Results of efforts to immobilize and seal the source in place;
 5. A brief description of the attempted recovery effort;
 6. Depth of the source;
 7. Depth of the top of the cement plug;
 8. Depth of the well;
 9. The reasons why further efforts to recover the source are likely to result in an immediate threat to public health and safety, necessitating abandonment;

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10. Information contained on the permanent identification plaque; and
11. State and federal agencies receiving a copy of the report.

Historical Note

Adopted effective April 2, 1990 (Supp. 90-2). Amended effective June 13, 1997 (Supp. 97-2). Amended by final rulemaking at 9 A.A.R. 4302, effective November 14, 2003 (Supp. 03-3). Section repealed; new Section made by final rulemaking at 10 A.A.R. 2122, effective July 3, 2004 (Supp. 04-2).

ARTICLE 18. RESERVED**ARTICLE 19. PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL****R12-1-1901. Purpose**

This Article has been established to provide the requirements for the physical protection program for any licensee that possesses an aggregated category 1 or category 2 quantity of radioactive material listed in Appendix A to this Article. These requirements provide reasonable assurance of the security of category 1 or category 2 quantities of radioactive material by protecting these materials from theft or diversion. Specific requirements for access to material, use of material, transfer of material, and transport of material are included. No provision of this Article authorizes possession of licensed material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1902. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1903. Scope

- A. R12-1-1921 through R12-1-1957 of this Article apply to any person who, under the rules in this chapter, possesses or uses at any site, an aggregated category 1 or category 2 quantity of radioactive material.
- B. R12-1-1971 through R12-1-1981 of this Article applies to any person who, under the rules of this chapter:
 1. Transports or delivers to a carrier for transport in a single shipment, a category 1 or category 2 quantity of radioactive material; or
 2. Imports or exports a category 1 or category 2 quantity of radioactive material; the provisions only apply to the domestic portion of the transport.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1904. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1905. Definitions

The following definitions apply in this Article, unless the context otherwise requires:

“Access control means a system for allowing only approved individuals to have unescorted access to the security zone and for ensuring that all other individuals are subject to escorted access.

“Act” means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto.

“Aggregated” means accessible by the breach of a single physical barrier that would allow access to radioactive material in any form, including any devices that contain the radioactive material, when the total activity equals or exceeds a category 2 quantity of radioactive material.

“Agreement State” means any state with which the Atomic Energy Commission or the U.S. Nuclear Regulatory Commission has entered into an effective agreement under subsection 274b. of the Act. Non-agreement State means any other State.

“Approved individual” means an individual whom the licensee has determined to be trustworthy and reliable for unescorted access in accordance with R12-1-1921 through R12-1-1933 of this Article and who has completed the training required by R12-1-1943(C).

“Background investigation” means the investigation conducted by a licensee or applicant to support the determination of trustworthiness and reliability.

“Becquerel (Bq)” means one disintegration per second.

“Byproduct material” means the same as in R12-1-102.

“Category 1 quantity of radioactive material” means a quantity of radioactive material meeting or exceeding the category 1 threshold in Table 1 of Appendix A to this Article. This quantity is determined by calculating the ratio of the total activity of each radionuclide to the category 1 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds 1, the quantity would be considered a category 1 quantity. Category 1 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

“Category 2 quantity of radioactive material” means a quantity of radioactive material meeting or exceeding the category 2 threshold but less than the category 1 threshold in Table 1 of Appendix A to this Article. This quantity is determined by calculating the ratio of the total activity of each radionuclide to the category 2 threshold for that radionuclide and adding the ratios together. If the sum is equal to or exceeds 1, the quantity would be considered a category 2 quantity. Category 2 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

“Commission” means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

“Curie” means the same as in R12-1-102.

“Diversion” means the unauthorized movement of radioactive material subject to this Article to a location different from the material's authorized destination inside or outside of the site at which the material is used or stored.

“Escorted access” means accompaniment while in a security zone by an approved individual who maintains continuous direct visual surveillance at all times over an individual who is not approved for unescorted access.

“Fingerprint orders” means the orders issued by the U.S. Nuclear Regulatory Commission or the legally binding requirements issued by Agreement States that require fingerprints and criminal history records checks for individuals with unescorted access to category 1 and category 2 quantities of radioactive material or safeguards information-modified handling.

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“Government agency” means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

“License”, except where otherwise specified, means a license for byproduct material issued pursuant to the rules in Articles 3, 5, 7, and 15 of this chapter.

“License issuing authority” means the licensing agency that issued the license, i.e. the Agency, U.S. Nuclear Regulatory Commission, or the appropriate agency of an Agreement State.

“Local law enforcement agency (LLEA)” means a public or private organization that has been approved by a federal, state, or local government to carry firearms and make arrests, and is authorized and has the capability to provide an armed response in the jurisdiction where the licensed category 1 or category 2 quantity of radioactive material is used, stored, or transported.

“Lost or missing licensed material” means licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

“Mobile device” means a piece of equipment containing licensed radioactive material that is either mounted on wheels or casters, or is otherwise equipped for moving without a need for disassembly or dismounting; or designed to be hand carried. Mobile devices do not include stationary equipment installed in a fixed location.

“Movement control center” means an operations center that is remote from transport activity and that maintains position information on the movement of radioactive material, receives reports of attempted attacks or thefts, provides a means for reporting these and other problems to appropriate agencies and can request and coordinate appropriate aid.

“No-later-than arrival time” means the date and time that the shipping licensee and receiving licensee have established as the time at which an investigation will be initiated if the shipment has not arrived at the receiving facility. The no-later-than arrival time may not be more than 6 hours after the estimated arrival time for shipments of category 2 quantities of radioactive material.

“Person” means:

Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the DOE (except that the Department shall be considered a person within the meaning of the rules in 10 CFR chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021), the Nuclear Waste Policy Act of 1982 (96 Stat. 2201), and section 3(b)(2) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (99 Stat. 1842), any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and

Any legal successor, representative, agent, or agency of the foregoing.

“Reviewing official” means the individual who shall make the trustworthiness and reliability determination of an individual to determine whether the individual may have, or continue to have, unescorted access to the category 1 or category 2 quantities of radioactive materials that are possessed by the licensee.

“Sabotage” means deliberate damage, with malevolent intent, to a category 1 or category 2 quantity of radioactive material, a device that contains a category 1 or category 2 quantity of radioactive material, or the components of the security system.

“Safe haven” means a readily recognizable and readily accessible site at which security is present or from which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement authorities.

“Security zone” means any temporary or permanent area determined and established by the licensee for the physical protection of category 1 or category 2 quantities of radioactive material.

“State” means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

“Telemetric position monitoring system” means a data transfer system that captures information by instrumentation and/or measuring devices about the location and status of a transport vehicle or package between the departure and destination locations.

“Trustworthiness and reliability” means characteristics of an individual considered dependable in judgment, character, and performance, such that unescorted access to category 1 or category 2 quantities of radioactive material by that individual does not constitute an unreasonable risk to the public health and safety or security. A determination of trustworthiness and reliability for this purpose is based upon the results from a background investigation.

“Unescorted access” means solitary access to an aggregated category 1 or category 2 quantity of radioactive material or the devices that contain the material.

“United States” when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1906. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1907. Communications

Except where otherwise specified or covered under licensing program as provided in this chapter, all communications and reports concerning the rules in this Article may be sent as follows:

1. By mail addressed to: ATTN: Arizona Radiation Regulatory Agency; Radioactive Materials Program; 4814 South 40th Street, Phoenix, Arizona 85040;
2. By hand delivery to the Agencies’ offices at 4814 South 40th Street, Phoenix, Arizona 85040;
3. Where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM.

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Electronic submissions shall be made in a manner that enables the Agency to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Electronic submissions can be by visiting the Agency's Website at <http://www.azrra.gov> and selecting specific RAM (Radioactive Material) Staff contact information or by email to ram@azrra.gov.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1908. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1909. Interpretations

Except as specifically authorized by the Agency in writing, no interpretations of the meaning of the rules in this Article by any officer or employee of the Agency other than a written interpretation by the Arizona Assistant Attorney General counsel assigned to the Agency will be recognized as binding upon the Agency.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1910. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1911. Specific Exemptions

- A.** The Agency may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the rules in this Article as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.
- B.** Any licensee's NRC-licensed activities are exempt from the requirements of R12-1-1921 through R12-1-1957 of this Article to the extent that its activities are included in a security plan required by 10 CFR part 73 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.
- C.** A licensee that possesses radioactive waste that contains category 1 or category 2 quantities of radioactive material is exempt from the requirements of R12-1-1921 through R12-1-1981 of this Article, except that any radioactive waste that contains discrete sources, ion-exchange resins, or activated material that weighs less than 2,000 kg (4,409 lbs.) is not exempt from the requirements of this Article. The licensee shall implement the following requirements to secure the radioactive waste:
1. Use continuous physical barriers that allow access to the radioactive waste only through established access control points;
 2. Use a locked door or gate with monitored alarm at the access control point;
 3. Assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and
 4. Immediately notify the LLEA and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage, or diversion of the radioactive waste that contains category 1 or category 2 quantities of radioactive material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1912. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1913. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1914. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1915. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1916. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1917. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1918. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1919. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1920. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1921. Personnel Access Authorization Requirements for Category 1 or Category 2 Quantities of Radioactive Material**A. General:**

1. Each licensee that possesses an aggregated quantity of radioactive material at or above the category 2 threshold shall establish, implement, and maintain its access authorization program in accordance with the requirements of this Article.
2. An applicant for a new license and each licensee that would become newly subject to the requirements of this Article upon application for modification of its license shall implement the requirements of this Article, as appropriate, before taking possession of an aggregated category 1 or category 2 quantity of radioactive material.
3. Any licensee that has not previously implemented the Security Orders or been subject to the provisions of R12-1-1921 through R12-1-1933 shall implement the provisions of R12-1-1921 through R12-1-1933 before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.

B. General performance objective: The licensee's access authorization program shall ensure that the individuals specified in subsection (C)(1) are trustworthy and reliable.

C. Applicability:

1. Licensees shall subject the following individuals to an access authorization program:

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- a. Any individual whose assigned duties require unescorted access to category 1 or category 2 quantities of radioactive material or to any device that contains the radioactive material; and
 - b. Reviewing officials.
2. Licensees need not subject the categories of individuals listed in R12-1-1929(A) to the investigation elements of the access authorization program.
 3. Licensees shall approve for unescorted access to category 1 or category 2 quantities of radioactive material only those individuals with job duties that require unescorted access to category 1 or category 2 quantities of radioactive material.
 4. Licensees may include individuals in the access authorization program under R12-1-1921 through R12-1-1933 and needing access to safeguards information-modified handling under 10 CFR part 73 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1922. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1923. Access Authorization Program Requirements

- A. Granting unescorted access authorization:
 1. Licensees shall implement the requirements of this Article for granting initial or reinstated unescorted access authorization.
 2. Individuals who have been determined to be trustworthy and reliable shall also complete the security training required by R12-1-1943(C) before being allowed unescorted access to category 1 or category 2 quantities of radioactive material.
- B. Reviewing officials:
 1. Reviewing officials are the only individuals who may make trustworthiness and reliability determinations that allow individuals to have unescorted access to category 1 or category 2 quantities of radioactive materials possessed by the licensee.
 2. Each licensee shall name one or more individuals to be reviewing officials. After completing the background investigation on the reviewing official, the licensee shall provide under oath or affirmation, a certification that the reviewing official is deemed trustworthy and reliable by the licensee. The fingerprints of the named reviewing official shall be taken by a law enforcement agency, Federal or State agencies that provide fingerprinting services to the public, or commercial fingerprinting services authorized by a State to take fingerprints. The licensee shall recertify that the reviewing official is deemed trustworthy and reliable every 10 years in accordance with R12-1-1925(C).
 3. Reviewing officials shall be permitted to have unescorted access to category 1 or category 2 quantities of radioactive materials or access to safeguards information or safeguards information-modified handling, if the licensee possesses safeguards information or safeguards information-modified handling. Reviewing officials permitted unescorted access to category 1 or category 2 quantities of radioactive materials shall receive appropriate radiation safety training initially and at a frequency not to exceed 12 months. The licensee shall maintain records of the initial and refresher training for three years from the date of training for Agency review.
4. Reviewing officials cannot approve other individuals to act as reviewing officials.
5. A reviewing official does not need to undergo a new background investigation before being named by the licensee as the reviewing official if:
 - a. The individual has undergone a background investigation that included fingerprinting and an FBI criminal history records check and has been determined to be trustworthy and reliable by the licensee; or
 - b. The individual is subject to a category listed in R12-1-1929(A).
- C. Informed consent:
 1. Licensees may not initiate a background investigation without the informed and signed consent of the subject individual. This consent shall include authorization to share personal information with other individuals or organizations as necessary to complete the background investigation. Before a final adverse determination, the licensee shall provide the individual with an opportunity to correct any inaccurate or incomplete information that is developed during the background investigation. Licensees do not need to obtain signed consent from those individuals that meet the requirements of R12-1-1925(B). A signed consent shall be obtained prior to any reinvestigation.
 2. The subject individual may withdraw his or her consent at any time. Licensees shall inform the individual that:
 - a. If an individual withdraws his or her consent, the licensee may not initiate any elements of the background investigation that were not in progress at the time the individual withdrew his or her consent; and
 - b. The withdrawal of consent for the background investigation is sufficient cause for denial or termination of unescorted access authorization.
- D. Personal history disclosure: Any individual who is applying for unescorted access authorization shall disclose the personal history information that is required by the licensee's access authorization program for the reviewing official to make a determination of the individual's trustworthiness and reliability. Refusal to provide, or the falsification of, any personal history information required by this Article is sufficient cause for denial or termination of unescorted access.
- E. Determination basis:
 1. The reviewing official shall determine whether to permit, deny, unfavorably terminate, maintain, or administratively withdraw an individual's unescorted access authorization based on an evaluation of all of the information collected to meet the requirements of this Article.
 2. The reviewing official may not permit any individual to have unescorted access until the reviewing official has evaluated all of the information collected to meet the requirements of this Article and determined that the individual is trustworthy and reliable. The reviewing official may deny unescorted access to any individual based on information obtained at any time during the background investigation.
 3. The licensee shall document the basis for concluding whether or not there is reasonable assurance that an individual is trustworthy and reliable.
 4. The reviewing official may terminate or administratively withdraw an individual's unescorted access authorization based on information obtained after the background

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investigation has been completed and the individual granted unescorted access authorization.

5. Licensees shall maintain a list of persons currently approved for unescorted access authorization. When a licensee determines that a person no longer requires unescorted access or meets the access authorization requirement, the licensee shall remove the person from the approved list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to have unescorted access to the material.

F. Procedures: Licensees shall develop, implement, and maintain written procedures for implementing the access authorization program. The procedures shall include provisions for the notification of individuals who are denied unescorted access. The procedures shall include provisions for the review, at the request of the affected individual, of a denial or termination of unescorted access authorization. The procedures shall contain a provision to ensure that the individual is informed of the grounds for the denial or termination of unescorted access authorization and allow the individual an opportunity to provide additional relevant information.

G. Right to correct and complete information:

1. Prior to any final adverse determination, licensees shall provide each individual subject to this Article with the right to complete, correct, and explain information obtained as a result of the licensee's background investigation. Confirmation of receipt by the individual of this notification shall be maintained by the licensee for a period of 1 year from the date of the notification.
2. If, after reviewing his or her criminal history record, an individual believes that it is incorrect or incomplete in any respect and wishes to change, correct, update, or explain anything in the record, the individual may initiate challenge procedures. These procedures include direct application by the individual challenging the record to the law enforcement agency that contributed the questioned information or a direct challenge as to the accuracy or completeness of any entry on the criminal history record to the Federal Bureau of Investigation, Criminal Justice Information Services (CJIS) Division, ATTN: SCU, Mod. D-2, 1000 Custer Hollow Road, Clarksburg, WV 26306 as set forth in 28 CFR 16.30 through 16.34. In the latter case, the Federal Bureau of Investigation (FBI) will forward the challenge to the agency that submitted the data, and will request that the agency verify or correct the challenged entry. Upon receipt of an official communication directly from the agency that contributed the original information, the FBI Identification Division makes any changes necessary in accordance with the information supplied by that agency. Licensees shall provide at least 10 days for an individual to initiate action to challenge the results of an FBI criminal history records check after the record being made available for his or her review. The licensee may make a final adverse determination based upon the criminal history records only after receipt of the FBI's confirmation or correction of the record.

H. Records:

1. The licensee shall retain documentation regarding the trustworthiness and reliability of individual employees for 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.
2. The licensee shall retain a copy of the current access authorization program procedures as a record for 3 years after the procedure is no longer needed. If any portion of

the procedure is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.

3. The licensee shall retain the list of persons approved for unescorted access authorization for 3 years after the list is superseded or replaced.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1924. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1925. Background Investigations

A. Initial investigation: Before allowing an individual unescorted access to category 1 or category 2 quantities of radioactive material or to the devices that contain the material, licensees shall complete a background investigation of the individual seeking unescorted access authorization. The scope of the investigation shall encompass at least the 7 years preceding the date of the background investigation or since the individual's eighteenth birthday, whichever is shorter. The background investigation shall include at a minimum:

1. Fingerprinting and an FBI identification and criminal history records check in accordance with R12-1-1927;
2. Verification of true identity. Licensees shall verify the true identity of the individual who is applying for unescorted access authorization to ensure that the applicant is who he or she claims to be. A licensee shall review official identification documents (e.g., driver's license; passport; government identification; certificate of birth issued by the state, province, or country of birth) and compare the documents to personal information data provided by the individual to identify any discrepancy in the information. Licensees shall document the type, expiration, and identification number of the identification document, or maintain a photocopy of identifying documents on file in accordance with R12-1-1931. Licensees shall certify in writing that the identification was properly reviewed, and shall maintain the certification and all related documents for review upon inspection;
3. Employment history verification. Licensees shall complete an employment history verification, including military history. Licensees shall verify the individual's employment with each previous employer for the most recent 7 years before the date of application;
4. Verification of education. Licensees shall verify that the individual participated in the education process during the claimed period;
5. Character and reputation determination. Licensees shall complete reference checks to determine the character and reputation of the individual who has applied for unescorted access authorization. Unless other references are not available, reference checks may not be conducted with any person who is known to be a close member of the individual's family, including but not limited to the individual's spouse, parents, siblings, or children, or any individual who resides in the individual's permanent household. Reference checks under this section shall be limited to whether the individual has been and continues to be trustworthy and reliable;
6. The licensee shall also, to the extent possible, obtain independent information to corroborate that provided by

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the individual (e.g., seek references not supplied by the individual); and

7. If a previous employer, educational institution, or any other entity with which the individual claims to have been engaged fails to provide information or indicates an inability or unwillingness to provide information within a time frame deemed appropriate by the licensee but at least after 10 business days of the request or if the licensee is unable to reach the entity, the licensee shall document the refusal, unwillingness, or inability in the record of investigation; and attempt to obtain the information from an alternate source.

B. Grandfathering:

1. Individuals who have been determined to be trustworthy and reliable for unescorted access to category 1 or category 2 quantities of radioactive material under the Fingerprint Orders may continue to have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. These individuals shall be subject to the reinvestigation requirement.
2. Individuals who have been determined to be trustworthy and reliable under the provisions of 10 CFR part 73 revised January 1, 2015, incorporated by reference, available under R12-1-101, and containing no future editions or amendments; or the security orders for access to safeguards information, safeguards information-modified handling, or risk-significant material may have unescorted access to category 1 and category 2 quantities of radioactive material without further investigation. The licensee shall document that the individual was determined to be trustworthy and reliable under the provisions of 10 CFR part 73 revised January 1, 2015, incorporated by reference, available under R12-1-101, and containing no future editions or amendments; or a security order. Security order, in this context, refers to any order that was issued by the NRC that required fingerprints and an FBI criminal history records check for access to safeguards information, safeguards information-modified handling, or risk significant material such as special nuclear material or large quantities of uranium hexafluoride. These individuals shall be subject to the reinvestigation requirement.

- C. Re-investigations:** Licensees shall conduct a reinvestigation every 10 years for any individual with unescorted access to category 1 or category 2 quantities of radioactive material. The reinvestigation shall consist of fingerprinting and an FBI identification and criminal history records check in accordance with R12-1-1927. The re-investigations shall be completed within 10 years of the date on which these elements were last completed.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1926. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1927. Requirements for Criminal History Records Checks of Individuals Granted Unescorted Access to Category 1 or Category 2 Quantities of Radioactive Material

A. General performance objective and requirements:

1. Except for those individuals listed in R12-1-1929 and those individuals grandfathered under R12-1-1925(B), each licensee subject to the provisions of this Article shall fingerprint each individual who is to be permitted unescorted access to category 1 or category 2 quantities of

radioactive material. Licensees shall transmit all collected fingerprints to the Agency for transmission to the FBI. The licensee shall use the information received from the FBI as part of the required background investigation to determine whether to grant or deny further unescorted access to category 1 or category 2 quantities of radioactive materials for that individual.

2. The licensee shall notify each affected individual that his or her fingerprints will be used to secure a review of his or her criminal history record, and shall inform him or her of the procedures for revising the record or adding explanations to the record.
3. Fingerprinting is not required if a licensee is reinstating an individual's unescorted access authorization to category 1 or category 2 quantities of radioactive materials if:
 - a. The individual returns to the same facility that granted unescorted access authorization within 365 days of the termination of his or her unescorted access authorization; and
 - b. The previous access was terminated under favorable conditions.
4. Fingerprints do not need to be taken if an individual who is an employee of a licensee, contractor, manufacturer, or supplier has been granted unescorted access to category 1 or category 2 quantities of radioactive material, access to safeguards information, or safeguards information-modified handling by another licensee, based upon a background investigation conducted under this Article, the Fingerprint Orders, or 10 CFR part 73 revised January 1, 2015, incorporated by reference, and available under R12-1-101. This incorporated material contains no future editions or amendments. An existing criminal history records check file may be transferred to the licensee asked to grant unescorted access in accordance with the provisions of R12-1-1931(C).
5. Licensees shall use the information obtained as part of a criminal history records check solely for the purpose of determining an individual's suitability for unescorted access authorization to category 1 or category 2 quantities of radioactive materials, access to safeguards information, or safeguards information-modified handling.

B. Prohibitions:

1. Licensees may not base a final determination to deny an individual unescorted access authorization to category 1 or category 2 quantities of radioactive material solely on the basis of information received from the FBI involving:
 - a. An arrest more than 1 year old for which there is no information of the disposition of the case; or
 - b. An arrest that resulted in dismissal of the charge or an acquittal.
2. Licensees may not use information received from a criminal history records check obtained under this section in a manner that would infringe upon the rights of any individual under the First Amendment to the Constitution of the United States, nor shall licensees use the information in any way that would discriminate among individuals on the basis of race, religion, national origin, gender, or age.

C. Procedures for processing of fingerprint checks:

1. For the purpose of complying with this Article, licensees shall use an appropriate method listed in 10 CFR 37.7 revised January 1, 2015, incorporated by reference, available under R12-1-101, and containing no future editions or amendments; to submit to the U.S. Nuclear Regulatory Commission, Director, Division of Facilities and Security, 11545 Rockville Pike, ATTN: Criminal History Program/Mail Stop TWB-05 B32M, Rockville, Maryland

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20852, one completed, legible standard fingerprint card (Form FD-258, ORIMDNR0000Z), electronic fingerprint scan or, where practicable, other fingerprint record for each individual requiring unescorted access to category 1 or category 2 quantities of radioactive material. Copies of these forms may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling 1-630-829-9565, or by email to FORMS.Resource@nrc.gov. Guidance on submitting electronic fingerprints can be found at <http://www.nrc.gov/site-help/e-submittals.html>.

2. Fees for the processing of fingerprint checks are due upon application. Licensees shall submit payment with the application for the processing of fingerprints through corporate check, certified check, cashier's check, money order, or electronic payment, made payable to "U.S. NRC." (For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security at 301-492-3531.) Combined payment for multiple applications is acceptable. The Commission publishes the amount of the fingerprint check application fee on the NRC's public website. (To find the current fee amount, go to the Electronic Submittals page at <http://www.nrc.gov/site-help/e-submittals.html> and see the link for the Criminal History Program under Electronic Submission Systems.)
3. The U.S. Nuclear Regulatory Commission will forward to the submitting licensee all data received from the FBI as a result of the licensee's application(s) for criminal history records checks.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1928. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1929. Relief From Fingerprinting, Identification, and Criminal History Records Checks and Other Elements of Background Investigations for Designated Categories of Individuals Permitted Unescorted Access to Certain Radioactive Materials

- A.** Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, and other elements of the background investigation are not required for the following individuals prior to granting unescorted access to category 1 or category 2 quantities of radioactive materials:
1. An employee of the U.S. Nuclear Regulatory Commission or of the Executive Branch of the U.S. Government who has undergone fingerprinting for a prior U.S. Government criminal history records check;
 2. A Member of Congress;
 3. An employee of a member of Congress or Congressional committee who has undergone fingerprinting for a prior U.S. Government criminal history records check;
 4. The Governor of a State or his or her designated State employee representative;
 5. Federal, State, or local law enforcement personnel;
 6. State Radiation Control Program Directors and State Homeland Security Advisors or their designated State employee representatives;
 7. Agreement State employees conducting security inspections on behalf of the NRC under an agreement executed under section 274.i. of the Atomic Energy Act;

8. Representatives of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement who have been certified by the NRC;
9. Emergency response personnel who are responding to an emergency;
10. Commercial vehicle drivers for road shipments of category 1 and category 2 quantities of radioactive material;
11. Package handlers at transportation facilities such as freight terminals and railroad yards;
12. Any individual who has an active Federal security clearance, provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that granted the Federal security clearance or reviewed the criminal history records check shall be provided to the licensee. The licensee shall retain this documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material; and
13. Any individual employed by a service provider licensee for which the service provider licensee has conducted the background investigation for the individual and approved the individual for unescorted access to category 1 or category 2 quantities of radioactive material. Written verification from the service provider shall be provided to the licensee. The licensee shall retain the documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

- B.** Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, are not required for an individual who has had a favorably adjudicated U.S. Government criminal history records check within the last 5 years, under a comparable U.S. Government program involving fingerprinting and an FBI identification and criminal history records check provided that he or she makes available the appropriate documentation. Written confirmation from the agency/employer that reviewed the criminal history records check shall be provided to the licensee. The licensee shall retain this documentation for a period of 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material. These programs include, but are not limited to:

1. National Agency Check;
2. Transportation Worker Identification Credentials (TWIC) under 49 CFR part 1572;
3. Bureau of Alcohol, Tobacco, Firearms, and Explosives background check and clearances under 27 CFR part 555;
4. Health and Human Services security risk assessments for possession and use of select agents and toxins under 42 CFR part 73;
5. Hazardous Material security threat assessment for hazardous material endorsement to commercial driver's license under 49 CFR part 1572; and
6. Customs and Border Protection's Free and Secure Trade (FAST) Program.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1930. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

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R12-1-1931. Protection of Information

- A. Each licensee who obtains background information on an individual under this Article shall establish and maintain a system of files and written procedures for protection of the record and the personal information from unauthorized disclosure.
- B. The licensee may not disclose the record or personal information collected and maintained to persons other than the subject individual, his or her representative, or to those who have a need to have access to the information in performing assigned duties in the process of granting or denying unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling. No individual authorized to have access to the information may disseminate the information to any other individual who does not have a need to know.
- C. The personal information obtained on an individual from a background investigation may be provided to another licensee:
 1. Upon the individual's written request to the licensee holding the data to disseminate the information contained in his or her file; and
 2. The recipient licensee verifies information such as name, date of birth, social security number, gender, and other applicable physical characteristics.
- D. The licensee shall make background investigation records obtained under this Article available for examination by an authorized representative of the Agency to determine compliance with the rules and laws.
- E. The licensee shall retain all fingerprint and criminal history records (including data indicating no record) received from the FBI, or a copy of these records if the individual's file has been transferred, on an individual for 3 years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1932. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1933. Access Authorization Program Review

- A. Each licensee shall be responsible for the continuing effectiveness of the access authorization program. Each licensee shall ensure that access authorization programs are reviewed to confirm compliance with the requirements of this Article and that comprehensive actions are taken to correct any noncompliance that is identified. The review program shall evaluate all program performance objectives and requirements. Each licensee shall periodically (at least annually) review the access program content and implementation.
- B. The results of the reviews, along with any recommendations, shall be documented. Each review report shall identify conditions that are adverse to the proper performance of the access authorization program, the cause of the condition(s), and, when appropriate, recommend corrective actions, and corrective actions taken. The licensee shall review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.
- C. Review records shall be maintained for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1934. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1935. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1936. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1937. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1938. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1939. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1940. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1941. Security Program

- A. Applicability:
 1. Each licensee that possesses an aggregated category 1 or category 2 quantity of radioactive material shall establish, implement, and maintain a security program in accordance with the requirements of this Article.
 2. An applicant for a new license and each licensee that would become newly subject to the requirements of this Article upon application for modification of its license shall implement the requirements of this Article, as appropriate, before taking possession of an aggregated category 1 or category 2 quantity of radioactive material.
 3. Any licensee that has not previously implemented the Security Orders or been subject to the provisions of R12-1-1941 through R12-1-1957 shall provide written notification to the Agency, as specified in R12-1-1907, at least 90 days before aggregating radioactive material to a quantity that equals or exceeds the category 2 threshold.
- B. General performance objective: Each licensee shall establish, implement, and maintain a security program that is designed to monitor and, without delay, detect, assess, and respond to an actual or attempted unauthorized access to category 1 or category 2 quantities of radioactive material.
- C. Program features: Each licensee's security program shall include the program features, as appropriate, described in R12-1-1943, R12-1-1945, R12-1-1947, R12-1-1949, R12-1-1951, R12-1-1953, and R12-1-1955.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1942. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1943. General Security Program Requirements

- A. Security plan:
 1. Each licensee identified in R12-1-1941(A) shall develop a written security plan specific to its facilities and operations. The purpose of the security plan is to establish the licensee's overall security strategy to ensure the inte-

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- grated and effective functioning of the security program required by this Article. The security plan shall, at a minimum:
- a. Describe the measures and strategies used to implement the requirements of this Article; and
 - b. Identify the security resources, equipment, and technology used to satisfy the requirements of this Article.
2. The security plan shall be reviewed and approved by the individual with overall responsibility for the security program.
 3. A licensee shall revise its security plan as necessary to ensure the effective implementation of Agency requirements. The licensee shall ensure that:
 - a. The revision has been reviewed and approved by the individual with overall responsibility for the security program; and
 - b. The affected individuals are instructed on the revised plan before the changes are implemented.
 4. The licensee shall retain a copy of the current security plan as a record for 3 years after the security plan is no longer required. If any portion of the plan is superseded, the licensee shall retain the superseded material for 3 years after the record is superseded.
- B. Implementing procedures:**
1. The licensee shall develop and maintain written procedures that document how the requirements of this Article and the security plan will be met.
 2. The implementing procedures and revisions to these procedures shall be approved in writing by the individual with overall responsibility for the security program.
 3. The licensee shall retain a copy of the current procedure as a record for 3 years after the procedure is no longer needed. Superseded portions of the procedure shall be retained for 3 years after the record is superseded.
- C. Training:**
1. Each licensee shall conduct training to ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. The training shall include instruction in:
 - a. The licensee's security program and procedures to secure category 1 or category 2 quantities of radioactive material, and in the purposes and functions of the security measures employed;
 - b. The responsibility to report promptly to the licensee any condition that causes or may cause a violation of Agency requirements;
 - c. The responsibility of the licensee to report promptly to the local law enforcement agency and licensee any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material; and
 - d. The appropriate response to security alarms.
 2. In determining those individuals who shall be trained on the security program, the licensee shall consider each individual's assigned activities during authorized use and response to potential situations involving actual or attempted theft, diversion, or sabotage of category 1 or category 2 quantities of radioactive material. The extent of the training shall be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material.
 3. Refresher training shall be provided at a frequency not to exceed 12 months and when significant changes have been made to the security program. This training shall include:
 - a. Review of the training requirements of subsection (c) and any changes made to the security program since the last training;
 - b. Reports on any relevant security issues, problems, and lessons learned;
 - c. Relevant results of Agency inspections; and
 - d. Relevant results of the licensee's program review and testing and maintenance.
 4. The licensee shall maintain records of the initial and refresher training for 3 years from the date of the training. The training records shall include dates of the training, topics covered, a list of licensee personnel in attendance, and related information.
- D. Protection of information:**
1. Licensees authorized to possess category 1 or category 2 quantities of radioactive material shall limit access to and unauthorized disclosure of their security plan, implementing procedures, and the list of individuals that have been approved for unescorted access.
 2. Efforts to limit access shall include the development, implementation, and maintenance of written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures.
 3. Before granting an individual access to the security plan or implementing procedures, licensees shall:
 - a. Evaluate an individual's need to know the security plan or implementing procedures; and
 - b. If the individual has not been authorized for unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling, the licensee shall complete a background investigation to determine the individual's trustworthiness and reliability. A trustworthiness and reliability determination shall be conducted by the reviewing official and shall include the background investigation elements contained in R12-1-1925(A)(2) through (A)(7).
 4. Licensees need not subject the following individuals to the background investigation elements for protection of information:
 - a. The categories of individuals listed in R12-1-1929(A); or
 - b. Security service provider employees, provided written verification that the employee has been determined to be trustworthy and reliable, by the required background investigation in R12-1-1925(A)(2) through (A)(7), has been provided by the security service provider.
 5. The licensee shall document the basis for concluding that an individual is trustworthy and reliable and should be granted access to the security plan or implementing procedures.
 6. Licensees shall maintain a list of persons currently approved for access to the security plan or implementing procedures. When a licensee determines that a person no longer needs access to the security plan or implementing procedures or no longer meets the access authorization requirements for access to the information, the licensee shall remove the person from the approved list as soon as possible, but no later than 7 working days, and take prompt measures to ensure that the individual is unable to obtain the security plan or implementing procedures.

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7. When not in use, the licensee shall store its security plan and implementing procedures in a manner to prevent unauthorized access. Information stored in non-removable electronic form shall be password protected.
8. The licensee shall retain as a record for 3 years after the document is no longer needed:
 - a. A copy of the information protection procedures; and
 - b. The list of individuals approved for access to the security plan or implementing procedures.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1944. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1945. Local Law Enforcement Agency (LLEA) Coordination

- A. A licensee subject to this Article shall coordinate, to the extent practicable, with an LLEA for responding to threats to the licensee's facility, including any necessary armed response. The information provided to the LLEA shall include:
 1. A description of the facilities and the category 1 and category 2 quantities of radioactive materials along with a description of the licensee's security measures that have been implemented to comply with this Article; and
 2. A notification that the licensee will request a timely armed response by the LLEA to any actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of material.
- B. The licensee shall notify the Agency listed in R12-1-1907 of this Article within 3 business days if:
 1. The LLEA has not responded to the request for coordination within 60 days of the coordination request; or
 2. The LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities.
- C. The licensee shall document its efforts to coordinate with the LLEA. The documentation shall be kept for 3 years.
- D. The licensee shall coordinate with the LLEA at least every 12 months, or when changes to the facility design or operation adversely affect the potential vulnerability of the licensee's material to theft, sabotage, or diversion.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1946. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1947. Security Zones

- A. Licensees shall ensure that all aggregated category 1 and category 2 quantities of radioactive material are used or stored within licensee established security zones. Security zones may be permanent or temporary.
- B. Temporary security zones shall be established as necessary to meet the licensee's transitory or intermittent business activities, such as periods of maintenance, source delivery, and source replacement.
- C. Security zones shall, at a minimum, allow unescorted access only to approved individuals through:
 1. Isolation of category 1 and category 2 quantities of radioactive materials by the use of continuous physical barriers that allow access to the security zone only through established access control points. A physical barrier is a natu-

ral or man-made structure or formation sufficient for the isolation of the category 1 or category 2 quantities of radioactive material within a security zone; or

2. Direct control of the security zone by approved individuals at all times; or
 3. A combination of continuous physical barriers and direct control.
- D. For category 1 quantities of radioactive material during periods of maintenance, source receipt, preparation for shipment, installation, or source removal or exchange, the licensee shall, at a minimum, provide sufficient individuals approved for unescorted access to maintain continuous surveillance of sources in temporary security zones and in any security zone in which physical barriers or intrusion detection systems have been disabled to allow such activities.
 - E. Individuals not approved for unescorted access to category 1 or category 2 quantities of radioactive material shall be escorted by an approved individual when in a security zone.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1948. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1949. Monitoring, Detection, and Assessment

- A. Monitoring and detection:
 1. Licensees shall establish and maintain the capability to continuously monitor and detect without delay all unauthorized entries into its security zones. Licensees shall provide the means to maintain continuous monitoring and detection capability in the event of a loss of the primary power source, or provide for an alarm and response in the event of a loss of this capability to continuously monitor and detect unauthorized entries.
 2. Monitoring and detection shall be performed by:
 - a. A monitored intrusion detection system that is linked to an onsite or offsite central monitoring facility; or
 - b. Electronic devices for intrusion detection alarms that will alert nearby facility personnel; or
 - c. A monitored video surveillance system; or
 - d. Direct visual surveillance by approved individuals located within the security zone; or
 - e. Direct visual surveillance by a licensee designated individual located outside the security zone.
 3. A licensee subject to this Article shall also have a means to detect unauthorized removal of the radioactive material from the security zone. This detection capability shall provide:
 - a. For category 1 quantities of radioactive material, immediate detection of any attempted unauthorized removal of the radioactive material from the security zone. Such immediate detection capability shall be provided by:
 - i. Electronic sensors linked to an alarm; or
 - ii. Continuous monitored video surveillance; or
 - iii. Direct visual surveillance.
 - b. For category 2 quantities of radioactive material, weekly verification through physical checks, tamper indicating devices, use, or other means to ensure that the radioactive material is present.
- B. Assessment: Licensees shall immediately assess each actual or attempted unauthorized entry into the security zone to determine whether the unauthorized access was an actual or attempted theft, sabotage, or diversion.

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C. Personnel communications and data transmission: For personnel and automated or electronic systems supporting the licensee's monitoring, detection, and assessment systems, licensees shall:

1. Maintain continuous capability for personnel communication and electronic data transmission and processing among site security systems; and
2. Provide an alternative communication capability for personnel, and an alternative data transmission and processing capability, in the event of a loss of the primary means of communication or data transmission and processing. Alternative communications and data transmission systems may not be subject to the same failure modes as the primary systems.

D. Response: Licensees shall immediately respond to any actual or attempted unauthorized access to the security zones, or actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material at licensee facilities or temporary job sites. For any unauthorized access involving an actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material, the licensee's response shall include requesting, without delay, an armed response from the LLEA.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1950. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1951. Maintenance and Testing

- A. Each licensee subject to this R12-1-1941 through R12-1-1957 shall implement a maintenance and testing program to ensure that intrusion alarms, associated communication systems, and other physical components of the systems used to secure or detect unauthorized access to radioactive material are maintained in operable condition and are capable of performing their intended function when needed. The equipment relied on to meet the security requirements of this part shall be inspected and tested for operability and performance at the manufacturer's suggested frequency. If there is no suggested manufacturer's suggested frequency, the testing shall be performed at least annually, not to exceed 12 months.
- B. The licensee shall maintain records on the maintenance and testing activities for 3 years. The record shall include:
1. The date of activity;
 2. Type of activity performed;
 3. A list of the equipment involved;
 4. The results of the activity;
 5. The name of the individual that conducted the activity;
 6. The repair or maintenance (if applicable) that was performed.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1952. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1953. Requirements for Mobile Devices

Each licensee that possesses mobile devices containing category 1 or category 2 quantities of radioactive material shall:

- A. Have two independent physical controls that form tangible barriers to secure the material from unauthorized removal

when the device is not under direct control and constant surveillance by the licensee; and

- B. For devices in or on a vehicle or trailer, unless the health and safety requirements for a site prohibit the disabling of the vehicle, the licensee shall utilize a method to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee. Licensees shall not rely on the removal of an ignition key to meet this requirement.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1954. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1955. Security Program Review

- A. Each licensee shall be responsible for the continuing effectiveness of the security program. Each licensee shall ensure that the security program is reviewed to confirm compliance with the requirements of this Article and that comprehensive actions are taken to correct any noncompliance that is identified. The review shall include the radioactive material security program content and implementation. Each licensee shall periodically (at least annually) review the security program content and implementation.
- B. The results of the review, along with any recommendations, shall be documented. Each review report shall identify conditions that are adverse to the proper performance of the security program, the cause of the condition(s), and, when appropriate, recommend corrective actions, and corrective actions taken. The licensee shall review the findings and take any additional corrective actions necessary to preclude repetition of the condition, including reassessment of the deficient areas where indicated.
- C. The licensee shall maintain the review documentation for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1956. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1957. Reporting of Events

- A. The licensee shall immediately notify the LLEA after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of a category 1 or category 2 quantity of radioactive material. As soon as possible after initiating a response, but not at the expense of causing delay or interfering with the LLEA response to the event, the licensee shall notify the Agency. Notification shall be to a live person, a voice mail is not considered adequate notification. In no case shall the notification to the Agency be later than 4 hours after the discovery of any attempted or actual theft, sabotage, or diversion.
- B. The licensee shall assess any suspicious activity related to possible theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material and notify the LLEA as appropriate. As soon as possible but not later than 4 hours after notifying the LLEA, the licensee shall notify the Agency.
- C. The initial telephonic notification required by subsection (A) shall be followed within a period of 30 days by a written report submitted to the Agency by an appropriate method listed in R12-1-1907. The report shall include sufficient information

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for Agency analysis and evaluation, including identification of any necessary corrective actions to prevent future instances.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1958. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1959. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1960. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1961. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1962. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1963. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1964. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1965. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1966. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1967. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1968. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1969. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1970. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1971. Additional Requirements for Transfer of Category 1 and Category 2 Quantities of Radioactive Material

A licensee transferring a category 1 or category 2 quantity of radioactive material to a licensee of the Agency, NRC, or an Agreement State shall meet the license verification provisions listed below instead of those listed in sections of this chapter:

1. Any licensee transferring category 1 quantities of radioactive material to a licensee of the Agency, NRC, or an Agreement State, prior to conducting such transfer, shall verify with the Agency's license verification system or

the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred and that the licensee is authorized to receive radioactive material at the location requested for delivery. If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.

2. Any licensee transferring category 2 quantities of radioactive material to a licensee of the Agency, NRC, or an Agreement State, prior to conducting such transfer, shall verify with the Agency's license verification system or the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred. If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.
3. In an emergency where the licensee cannot reach the license issuing authority and the license verification system is nonfunctional, the licensee may accept a written certification by the transferee that it is authorized by license to receive the type, form, and quantity of radioactive material to be transferred. The certification shall include the license number, current revision number, issuing agency, expiration date, and for a category 1 shipment the authorized address. The licensee shall keep a copy of the certification. The certification shall be confirmed by use of the NRC's license verification system or by contacting the license issuing authority by the end of the next business day.
4. The transferor shall keep a copy of the verification documentation as a record for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1972. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1973. Applicability of Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Transit

- A. For shipments of category 1 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in Sections R12-1-1975(A) and (E); R12-1-1977; R12-1-1979(A)(1), (B)(1), and (C); and R12-1-1981(A), (C), (E), (G) and (H).
- B. For shipments of category 2 quantities of radioactive material, each shipping licensee shall comply with the requirements for physical protection contained in R12-1-1975(B) through (E); R12-1-1979(A)(2), (A)(3), (B)(2), and (C); and R12-1-1981(B), (D), (F), (G), and (H). For those shipments of category 2 quantities of radioactive material that meet the criteria of Article 15 of this Chapter, the shipping licensee shall also comply with the advance notification provisions of R12-1-1508 or R12-1-1512 as appropriate.
- C. The shipping licensee shall be responsible for meeting the requirements of R12-1-1971 through R12-1-1981 unless the receiving licensee has agreed in writing to arrange for the in-transit physical protection required under R12-1-1971 through R12-1-1981.
- D. Each licensee that imports or exports category 1 quantities of radioactive material shall comply with the requirements for

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physical protection during transit contained in R12-1-1975(A)(2) and (E); R12-1-1977; R12-1-1979(A)(1), (B)(1), and (C); and R12-1-1981(A), (C), (E), (G), and (H) for the domestic portion of the shipment.

- E. Each licensee that imports or exports category 2 quantities of radioactive material shall comply with the requirements for physical protection during transit contained in R12-1-1979(A)(2), (A)(3), and (B)(2); and R12-1-1981(B), (D), (F), (G), and (H) for the domestic portion of the shipment.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1974. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1975. Preplanning and Coordination of Shipment of Category 1 or Category 2 Quantities of Radioactive Material

- A. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 1 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall:
1. Preplan and coordinate shipment arrival and departure times with the receiving licensee;
 2. Preplan and coordinate shipment information with the governor or the governor's designee of any State through which the shipment will pass to:
 - a. Discuss the State's intention to provide law enforcement escorts; and
 - b. Identify safe havens; and
 3. Document the preplanning and coordination activities.
- B. Each licensee that plans to transport, or deliver to a carrier for transport, licensed material that is a category 2 quantity of radioactive material outside the confines of the licensee's facility or other place of use or storage shall coordinate the shipment no-later-than arrival time and the expected shipment arrival with the receiving licensee. The licensee shall document the coordination activities.
- C. Each licensee who receives a shipment of a category 2 quantity of radioactive material shall confirm receipt of the shipment with the originator. If the shipment has not arrived by the no-later-than arrival time, the receiving licensee shall notify the originator.
- D. Each licensee, who transports or plans to transport a shipment of a category 2 quantity of radioactive material, and determines that the shipment will arrive after the no-later-than arrival time provided pursuant to paragraph (B), shall promptly notify the receiving licensee of the new no-later-than arrival time.
- E. The licensee shall retain a copy of the documentation for preplanning and coordination and any revision thereof, as a record for 3 years.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1976. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1977. Advance Notification of Shipment of Category 1 Quantities of Radioactive Material

As specified in subsections (A) and (B), each licensee shall provide advance notification to the Agency and the governor of a State, or the governor's designee, of the shipment of licensed material in a category 1 quantity, through or across the boundary of the State,

before the transport, or delivery to a carrier for transport of the licensed material outside the confines of the licensee's facility or other place of use or storage.

1. Procedures for submitting advance notification:
 - a. The notification shall be made to the Agency and to the office of each appropriate governor or governor's designee. The contact information, including telephone and mailing addresses, of governors and governors' designees, is available on the NRC's website at <http://nrc-stp.ornl.gov/special/designee.pdf>. A list of the contact information is also available upon request from the Director, Division of Material Safety, State, Tribal, and Rulemaking Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Notifications to the Agency shall be to the Agency Director or their designee. The notification to the Agency may be made by email to ram@azrra.gov or by fax to (602) 437-0705.
 - b. A notification delivered by mail shall be postmarked at least 7 days before transport of the shipment commences at the shipping facility.
 - c. A notification delivered by any means other than mail shall reach the Agency at least 4 days before the transport of the shipment commences and shall reach the office of the governor or the governor's designee at least 4 days before transport of a shipment within or through the State.
2. Information to be furnished in advance notification of shipment: Each advance notification of shipment of category 1 quantities of radioactive material shall contain the following information, if available at the time of notification:
 - a. The name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;
 - b. The license numbers of the shipper and receiver;
 - c. A description of the radioactive material contained in the shipment, including the radionuclides and quantity;
 - d. The point of origin of the shipment and the estimated time and date that shipment will commence;
 - e. The estimated time and date that the shipment is expected to enter each State along the route;
 - f. The estimated time and date of arrival of the shipment at the destination; and
 - g. A point of contact, with a telephone number, for current shipment information.
3. Revision notice:
 - a. The licensee shall provide any information not previously available at the time of the initial notification, as soon as the information becomes available but not later than commencement of the shipment, to the governor of the State or the governor's designee and to the Agency's Director at the contact information available in R12-1-1907.
 - b. A licensee shall promptly notify the governor of the state or the governor's designee of any changes to the information provided in accordance with subsections (B) and (C)(1). The licensee shall also immediately notify the Agency's Director at the contact information available in R12-1-1907 of any such changes.
4. Cancellation notice: Each licensee who cancels a shipment for which advance notification has been sent shall send a cancellation notice to the governor of each State or

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to the governor's designee previously notified and to the Agency's Director at the contact information available in R12-1-1907. The licensee shall send the cancellation notice before the shipment would have commenced or as soon thereafter as possible. The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being cancelled.

5. Records: The licensee shall retain a copy of the advance notification and any revision and cancellation notices as a record for 3 years.
6. Protection of information: State officials, State employees, and other individuals, whether or not licensees of the Agency, the NRC, or an Agreement State, who receive schedule information of the kind specified R12-1-1977(B) shall protect that information against unauthorized disclosure as specified in R12-1-1943(D) of this Article.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1978. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1979. Requirements for Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material During Shipment**A. Shipments by road:**

1. Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:
 - a. Ensure that movement control centers are established that maintain position information from a remote location. These control centers shall monitor shipments 24 hours a day, 7 days a week, and have the ability to communicate immediately, in an emergency, with the appropriate law enforcement agencies.
 - b. Ensure that redundant communications are established that allow the transport to contact the escort vehicle (when used) and movement control center at all times. Redundant communications may not be subject to the same interference factors as the primary communication.
 - c. Ensure that shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center. A movement control center shall provide positive confirmation of the location, status, and control over the shipment. The movement control center shall be prepared to promptly implement preplanned procedures in response to deviations from the authorized route or a notification of actual, attempted, or suspicious activities related to the theft, loss, or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route.
 - d. Provide an individual to accompany the driver for those highway shipments with a driving time period greater than the maximum number of allowable hours of service in a 24-hour duty day as established by the Department of Transportation Federal Motor Carrier Safety Administration. The accompanying individual may be another driver.

- e. Develop written normal and contingency procedures to address:
 - i. Notifications to the communication center and law enforcement agencies;
 - ii. Communication protocols. Communication protocols shall include a strategy for the use of authentication codes and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost;
 - iii. Loss of communications; and
 - iv. Responses to an actual or attempted theft or diversion of a shipment.
- f. Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall ensure that drivers, accompanying personnel, and movement control center personnel have access to the normal and contingency procedures.

2. Each licensee that transports category 2 quantities of radioactive material shall maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance.

3. Each licensee who delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:
 - a. Use carriers that have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system shall allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.
 - b. Use carriers that maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and
 - c. Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

B. Shipments by rail:

1. Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 1 quantity of radioactive material shall:
 - a. Ensure that rail shipments are monitored by a telemetric position monitoring system or an alternative tracking system reporting to the licensee, third-party, or railroad communications center. The communications center shall provide positive confirmation of the location of the shipment and its status. The communications center shall implement preplanned procedures in response to deviations from the authorized route or to a notification of actual, attempted, or suspicious activities related to the theft or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route.
 - b. Ensure that periodic reports to the communications center are made at preset intervals.
2. Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a category 2 quantity of radioactive material shall:
 - a. Use carriers that have established package tracking systems. An established package tracking system is

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a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control and/or surveillance, the package tracking system shall allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.

- b. Use carriers that maintain constant control and/or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and
 - c. Use carriers that have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.
- C. Investigations: Each licensee who makes arrangements for the shipment of category 1 quantities of radioactive material shall immediately conduct an investigation upon the discovery that a category 1 shipment is lost or missing. Each licensee who makes arrangements for the shipment of category 2 quantities of radioactive material shall immediately conduct an investigation, in coordination with the receiving licensee, of any shipment that has not arrived by the designated no-later-than arrival time.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1980. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1981. Reporting of Events

- A. Within one hour of its determination that a shipment of category 1 quantities of radioactive material is lost or missing, a shipping licensee shall notify the appropriate LLEA and the Agency. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212. The appropriate LLEA is the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by R12-1-1979(C), the shipping licensee shall provide agreed upon updates to the Agency on the status of the investigation.
- B. Within four (4) hours of its determination that a shipment of category 2 quantities of radioactive material is lost or missing, a shipping licensee shall notify the appropriate LLEA and the Agency. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212. If, after 24 hours of its determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee shall immediately notify the Agency.
- C. The shipping licensee shall notify the designated LLEA along the shipment route as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to the theft or diversion of a shipment of a category 1 quantity of radioactive material. As soon as possible after notifying the LLEA, the licensee shall notify the Agency upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment of category 1 radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.
- D. The shipping licensee shall notify the Agency as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the

shipment, of a category 2 quantity of radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.

- E. The shipping licensee shall notify the Agency and the LLEA as soon as possible upon recovery of any lost or missing category 1 quantities of radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.
- F. The shipping licensee shall notify the Agency as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material. The Agency shall be notified by calling (602) 255-4845 during business hours, or by calling the after-hours emergency Department of Public Safety dispatch line, at (602) 223-2212.
- G. The initial telephonic notification required by subsections (A) through (D) shall be followed within a period of 30 days by a written report submitted to the Agency by an appropriate method listed in R12-1-1907. A written report is not required for notifications on suspicious activities required by subsections (C) and (D). The report shall set forth the following information:
 1. A description of the licensed material involved, including kind, quantity, and chemical and physical form;
 2. A description of the circumstances under which the loss or theft occurred;
 3. A statement of disposition, or probable disposition, of the licensed material involved;
 4. Actions that have been taken, or will be taken, to recover the material; and
 5. Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material.
- H. Subsequent to filing the written report, the licensee shall also report any additional substantive information on the loss or theft within 30 days after the licensee learns of such information.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-1982. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1983. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1984. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1985. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1986. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1987. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1988. Reserved

Historical Note

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1989. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1990. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1991. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1992. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1993. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1994. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1995. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1996. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1997. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1998. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-1999. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19100. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19101. Form of Records

Each record required by this Article shall be legible throughout the retention period specified by each Agency rule. The record may be the original or a reproduced copy or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications, shall include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19102. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19103. Record Retention

Licensees shall maintain the records that are required by the rules in this Article for the period specified by the appropriate rule. If a retention period is not otherwise specified, these records shall be retained until the Agency terminates the facility's license. All records related to this Article may be destroyed upon Agency termination of the facility's license.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19104. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19105. Inspections

- A. Each licensee shall afford to the Agency, at all reasonable times, opportunity to inspect category 1 or category 2 quantities of radioactive material and the premises and facilities wherein the nuclear material is used, produced, or stored.
- B. Each licensee shall make available to the Agency for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, use, acquisition, import, export, or transfer of category 1 or category 2 quantities of radioactive material.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19106. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19107. Violations

- A. The Agency may obtain an injunction or other court order to prevent a violation of the provisions of:
 1. A.R.S. § 30-685, as amended;
 2. A.A.C. Title 12, Chapter 1; or
 3. A rule or order issued by the Agency pursuant to Statute or the rules under A.A.C. Title 12, Chapter 1.
- B. The Agency may obtain a court order for the payment of a civil penalty imposed under A.R.S. § 30-687, as amended:
 1. For violations of:
 - a. The rules in A.A.C. Title 12, Chapter 1, as amended;
 - b. Nonpayment of fees listed in A.A.C. Title 12, Chapter 1, Article 13;
 - c. Any rule, or order issued pursuant to the sections specified in subsection (B)(1)(a);
 - d. Any term, condition, or limitation of any license issued under the sections specified in subsection (B)(1)(a).
 2. For any violation for which a license may be revoked.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

R12-1-19108. Reserved**Historical Note**

Section reserved at 22 A.A.R. 603 (Supp. 16-1).

R12-1-19109. Criminal Penalties

Arizona Revised Statutes § 30-673, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any rule issued under A.A.C. Title 12, Chapter 1.

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For purposes of this section, all the rules in this Article are issued under A.R.S. § 30-673 or the rules of the Agency.

Historical Note

New Section made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

Appendix A. — Table 1-Category 1 and Category 2 Threshold

The terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The curie values are provided for practical usefulness only.

Radioactive Material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Americium-241	60	1,620	0.6	16.2
Americium-241/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2
Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

Note: Calculations Concerning Multiple Sources or Multiple Radionuclides

The “sum of fractions” methodology for evaluating combinations of multiple sources or multiple radionuclides is to be used in determining whether a location meets or exceeds the threshold and is thus subject to the requirements of this part.

1. If multiple sources of the same radionuclide and/or multiple radionuclides are aggregated at a location, the sum of the ratios of the total activity of each of the radionuclides shall be determined to verify whether the activity at the location is less than the category 1 or category 2 thresholds of Table 1, as appropriate. If the calculated sum of the ratios, using the equation below, is greater than or equal to 1.0, then the applicable requirements of this part apply.
2. First determine the total activity for each radionuclide from Table 1. This is done by adding the activity of each individual source, material in any device, and any loose or bulk material that contains the radionuclide. Then use the equation below to calculate the sum of the ratios by inserting the total activity of the applicable radionuclides from Table 1 in the numerator of the equation and the corresponding threshold activity from Table 1 in the denominator of the equation.

Calculations shall be performed in metric values (i.e., TBq) and the numerator and denominator values shall be in the same units.

R1 = total activity for radionuclide 1
 R2 = total activity for radionuclide 2
 RN = total activity for radionuclide n
 AR1 = activity threshold for radionuclide 1
 AR2 = activity threshold for radionuclide 2
 ARN = activity threshold for radionuclide n

$$\sum_{i=1}^n \left[\frac{R_i}{AR_i} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1.0$$

Historical Note

Appendix A, consisting of Table 1 - Category 1 and Category 2 Threshold, made by final rulemaking at 22 A.A.R. 603, effective February 2, 2016 (Supp. 16-1).

Statutory Authority for the Rules in 12 A.A.C. 1, Article 3

30-651. Definitions

In this chapter, unless the context otherwise requires:

1. "Atomic energy" means all forms of energy released in the course of nuclear transformations, nuclear fission and nuclear fusion.
2. "Board" means the radiation regulatory hearing board.
3. "By-product material" means any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material and the tailings or wastes produced by the extraction or concentration of uranium ore thorium from any ore processed primarily for its source material content.
4. "Department" means the department of health services.
5. "Diagnostic mammography" means an x-ray imaging of the breast performed on persons who have symptoms or physical signs indicative of breast disease.
6. "Director" means the director of the department.
7. "Electronic product" means:
 - (a) Any machine or device designed to produce a beam of ionizing radiation as the result of the operation of an electronic circuit or component.
 - (b) Class IIIb and IV lasers, as classified by the United States food and drug administration.
 - (c) Radio frequency heaters, dryers and sealers.
 - (d) Any device employing a source of radio frequency electromagnetic radiation within a protective enclosure and used for heating or curing materials in industrial or manufacturing applications and in restaurants or food vending establishments. This subdivision does not include microwave ovens manufactured as consumer products and used for home food preparation.
 - (e) Microwave and shortwave diathermy.
 - (f) Mercury vapor, metal halide and high-pressure sodium lamps used for commercial lighting and industrial manufacturing processes or sunlamps used in commercial establishments for the intentional irradiation of humans.
 - (g) Therapeutic ultrasound devices.
 - (h) Industrial ultrasonic welders and sealers.
8. "Electronic product radiation" means:

(a) Any ionizing or nonionizing electromagnetic or particulate radiation that is emitted from an electronic product.

(b) Any sonic, infrasonic or ultrasonic wave that is emitted from an electronic product as the result of the operation of an electronic circuit in the product.

9. "Ionizing radiation" means gamma rays and x-rays, alpha and beta particles, high speed electrons, neutrons, protons and other nuclear particles or rays.

10. "Operation" means adjustments or procedures by the user required for the equipment to perform its intended functions.

11. "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency or political subdivision of this state, or any other state or political subdivision or agency of such state, and any legal successor, representative, agent, or agency of the foregoing, other than the United States nuclear regulatory commission or any successor, and other than federal government agencies and any other entities licensed by the United States nuclear regulatory commission or any successor.

12. "Radiation" means:

(a) Ionizing radiation, including gamma rays, x-rays, alpha and beta particles, high speed electrons, neutrons, protons and other nuclear particles or rays.

(b) Any electromagnetic radiation that may be produced by the operation of an electronic product.

(c) Any sonic, ultrasonic or infrasonic wave that may be produced by the operation of an electronic product.

13. "Radiation machine" means any manufactured devices or products producing any of the following:

(a) X-rays for medical, industrial, research and development or educational purposes.

(b) Electromagnetic radiation from an electronic product.

(c) Laser devices classified as class IIIb or IV by the United States food and drug administration.

(d) Diathermy machines.

14. "Radioactive material" means any material or materials, solid, liquid or gaseous, that emit radiation spontaneously.

15. "Screening mammography" means x-ray imaging of the breast of asymptomatic persons.

16. "Service" means major adjustments or repairs, usually requiring specialized training or tools, or both.

17. "Source material" means:

(a) Uranium, thorium or any other material that the governor declares by order to be source material after the United States nuclear regulatory commission or any successor has determined the material to be source material.

(b) Ores containing one or more of the materials, as provided in subdivision (a) of this paragraph, in such a concentration as the governor declares by order to be source material after the United States nuclear regulatory commission or any successor has determined the material in such a concentration to be source material.

18. "Sources of radiation" means radioactive materials, radiation machines and electronic products.

19. "Special nuclear material" means:

(a) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235 and any other material that the governor declares by order to be special nuclear material after the United States nuclear regulatory commission or any successor has determined the material to be special nuclear material, but does not include source material.

(b) Any material artificially enriched by any of the material provided in subdivision (a) of this paragraph, but does not include source material.

30-654. Powers and duties of the department

A. The department may:

1. Accept grants or other contributions from the federal government or other sources, public or private, to be used by the department to carry out any of the purposes of this chapter.

2. Do all things necessary, within the limitations of this chapter, to carry out the powers and duties of the department.

3. Conduct an information program, including:

(a) Providing information on the control and regulation of sources of radiation and related health and safety matters, on request, to members of the legislature, the executive offices, state departments and agencies and county and municipal governments.

(b) Providing such published information, audiovisual presentations, exhibits and speakers on the control and regulation of sources of radiation and related health and safety matters to the state's educational system at all educational levels as may be arranged.

(c) Furnishing to citizen groups, on request, speakers and such audiovisual presentations or published materials on the control and regulation of sources of radiation and related health and safety matters as may be available.

(d) Conducting, sponsoring or cosponsoring and actively participating in the professional meetings, symposia, workshops, forums and other group informational activities concerned with the control and regulation of sources of radiation and related health and safety matters when representation from this state at such meetings is determined to be important by the department.

B. The department shall:

1. Regulate the use, storage and disposal of sources of radiation.
2. Establish procedures for purposes of selecting any proposed permanent disposal site located within this state for low-level radioactive waste.
3. Coordinate with the department of transportation and the corporation commission in regulating the transportation of sources of radiation.
4. Assume primary responsibility for and provide necessary technical assistance to handle any incidents, accidents and emergencies involving radiation or sources of radiation occurring within this state.
5. Adopt rules deemed necessary to administer this chapter in accordance with title 41, chapter 6.
6. Adopt uniform radiation protection and radiation dose standards to be as nearly as possible in conformity with, and in no case inconsistent with, the standards contained in the regulations of the United States nuclear regulatory commission and the standards of the United States public health service. In the adoption of the standards, the department shall consider the total occupational radiation exposure of individuals, including that from sources that are not regulated by the department.
7. Adopt rules for personnel monitoring under the close supervision of technically competent people in order to determine compliance with safety rules adopted under this chapter.
8. Adopt a uniform system of labels, signs and symbols and the posting of the labels, signs and symbols to be affixed to radioactive products, especially those transferred from person to person.
9. By rule, require adequate training and experience of persons utilizing sources of radiation with respect to the hazards of excessive exposure to radiation in order to protect health and safety.
10. Adopt standards for the storage of radioactive material and for security against unauthorized removal.
11. Adopt standards for the disposal of radioactive materials into the air, water and sewers and burial in the soil in accordance with 10 Code of Federal Regulations part 20.
12. Adopt rules that are applicable to the shipment of radioactive materials in conformity with and compatible with those established by the United States nuclear regulatory commission, the department of transportation, the United States treasury department and the United States postal service.
13. In individual cases, impose additional requirements to protect health and safety or grant necessary exemptions that will not jeopardize health or safety, or both.
14. Make recommendations to the governor and furnish such technical advice as required on matters relating to the utilization and regulation of sources of radiation.

15. Conduct or cause to be conducted off-site radiological environmental monitoring of the air, water and soil surrounding any fixed nuclear facility, any uranium milling and tailing site and any uranium leaching operation, and maintain and report the data or results obtained by the monitoring as deemed appropriate by the department.

16. Develop and utilize information resources concerning radiation and radioactive sources.

17. Prescribe by rule a schedule of fees to be charged to categories of licensees and registrants of radiation sources, including academic, medical, industrial, waste, distribution and imaging categories. The fees shall cover a significant portion of the reasonable costs associated with processing the application for license or registration, renewal or amendment of the license or registration and the costs of inspecting the licensee or registrant activities and facilities, including the cost to the department of employing clerical help, consultants and persons possessing technical expertise and using analytical instrumentation and information processing systems.

18. Adopt rules establishing radiological standards, personnel standards and quality assurance programs to ensure the accuracy and safety of screening and diagnostic mammography.

C. All fees collected under subsection B, paragraph 17 of this section shall be deposited, pursuant to sections 35-146 and 35-147, in the state general fund.

30-657. Records

A. Each person that possesses or uses a source of radiation shall maintain records relating to its receipt, storage, transfer or disposal and such other records as the department requires by rule.

B. The department shall require each person that possesses or uses a source of radiation to maintain appropriate records showing the radiation exposure of all individuals for whom personnel monitoring is required by rules adopted by the department. Copies of records required by this section shall be submitted to the department on request by the department.

C. Any person that possesses or uses a source of radiation shall furnish to each employee for whom personnel monitoring is required a copy of the employee's personal exposure record at such times as prescribed by rules adopted by the department.

D. Any person that possesses or uses a source of radiation, when requested, shall submit to the department copies of records or reports submitted to the United States nuclear regulatory commission regardless of whether the person is subject to regulation by the department. The department, by rule, shall specify the records or reports required to be submitted to the department under this subsection.

30-671. Radiation protection standards

A. Radiation protection standards in rules adopted by the department under this chapter do not limit the kind or amount of radiation that may be intentionally applied to a person or animal for diagnostic or therapeutic purposes by or under the direction of a licensed practitioner of the healing arts.

B. Radiation sources shall be registered, licensed or exempted at the discretion of the department and shall be available for inspection as specified in this chapter or rules adopted under this chapter.

30-672. Licensing and registration of sources of radiation; exemptions

A. The agency by rule shall provide for general or specific licensing of by-product, source, special nuclear materials or devices or equipment utilizing such materials. The rules shall provide for amendment, suspension or revocation of the licenses. The agency shall require from the applicant satisfactory evidence that the applicant is using methods and techniques that are demonstrated to be safe and that the applicant is familiar with the rules adopted by the agency under section 30-654, subsection B, paragraph 5 relative to uniform radiation standards, total occupational radiation exposure norms, labels, signs and symbols, storage, waste disposal and shipment of radioactive materials. The agency may require that before the agency issues a license the employees or other personnel of an applicant who may deal with sources of radiation receive a course of instruction approved by the agency concerning agency rules. The agency shall require that the applicant's proposed equipment and facilities be adequate to protect health and safety and that the applicant's proposed administrative controls over the use of the sources of radiation requested be adequate to protect health and safety.

B. The agency may require registration or licensing of other sources of radiation if it has been determined necessary to protect public health or safety.

C. The agency may exempt certain sources of radiation or kinds of uses or users from the licensing or registration requirements set forth in this section when it finds that the exemption of such sources of radiation or kinds of uses or users will not constitute a significant risk to the health and safety of the public.

D. The agency shall not require persons licensed in this state to practice as a dentist, physician assistant, chiropractor or veterinarian or licensed in this state to practice medicine, surgery, osteopathy, chiropractic or naturopathic medicine to obtain any other license for the use of a diagnostic x-ray machine, but these persons are governed by their own licensing acts.

E. Persons licensed by the federal communications commission with respect to the activities for which they are licensed by that commission are exempted from this chapter.

F. Rules adopted pursuant to this chapter may provide for recognition of other state or federal licenses as the agency deems desirable, subject to such registration requirements as the agency prescribes.

G. Any licenses issued by the agency shall state the nature, use and extent of use of the source of radiation. If at any time subsequent to the issuance of a license the licensee desires any change in the nature, use or extent, the licensee shall seek an amendment or a new license under this section.

H. The agency shall prescribe by rule requirements for financial security as a condition for licensure under this article. The agency shall deposit all amounts posted, paid or forfeited as financial security into the radiation regulatory and perpetual care fund under section 30-694.

I. Persons applying for licensure shall provide notice to the city or town where the applicant proposes to operate as part of the application process.

J. Any facility that provides diagnostic or screening mammography examinations by or under the direction of a person exempted from further licensure under subsection D of this section shall obtain certification by the agency. The agency shall prescribe by rule the requirements of certification in order to ensure the accuracy and safety of diagnostic and screening mammography.

30-673. Unlawful acts

It is unlawful for any person to receive, use, possess, transfer, install or service any source of radiation unless the person is registered, licensed or exempted by the department in accordance with this chapter and rules adopted under this chapter.

30-681. Inspection

The department or its duly authorized representatives may enter at all reasonable times on any private or public property for the purpose of determining whether there is compliance with or a violation of this chapter and rules adopted under this chapter, except that entry into areas under the jurisdiction of the federal government shall be effected only with the concurrence of the federal government or its duly designated representative.

30-687. Routine enforcement actions; civil penalty

A. A person that violates this chapter or any rule adopted under this chapter or any license requirement is subject to a civil penalty imposed by the department. The department shall issue a notice of violation to the violator and may hold a hearing before assessing a civil penalty. The department, in lieu of imposing a civil penalty, may prescribe a time for elimination of the violation and assessment of a civil penalty if the violation is not eliminated within the time prescribed by the order. The attorney general shall bring actions to collect a civil penalty assessed under this subsection.

B. The department, by rule, shall establish a schedule of civil penalties based on factors such as the nature of the violation, the number of previous violations and whether the violation was of a serious nature.

C. The department may impose a civil penalty of not more than five thousand dollars for each violation for each day up to a maximum of twenty-five thousand dollars for any thirty-day period.

D. A final order of the department under this section is subject to appeal to the radiation regulatory hearing board.

30-688. Escalated enforcement action; orders; hearings; appeals

A. To enforce this chapter, the department, by rule, shall prescribe procedures for implementing an escalated enforcement action. An escalated enforcement action may include actions such as an informal hearing, impounding of radiation sources, assessment of civil penalties, an order modifying, suspending or revoking a license issued under this chapter or recommending prosecution of a criminal action.

B. The director, as part of an escalated enforcement action, may issue an order providing for an immediate suspension of a license issued under this section without notice or hearing if the director determines that a potential threat to the public health and safety exists.

C. The board shall conduct a hearing within ten days after the date of the director's order unless the person against whom the order is directed waives the right to a hearing within ten days. If the ten-day hearing requirement is waived, the board shall set the date for a hearing on the director's order within thirty days after the date of the order or within a time mutually agreeable to the interested

parties. The purpose of the hearing is to review the decision of the director to issue the order. The board shall make findings of fact and may continue, suspend or modify the director's order.

D. The board shall not waive the ten-day hearing requirement for any reason other than at the request of the person against whom the order was directed.

30-689. Violation; classification

A. Any person who violates any provision of this chapter or any rule, regulation or order placed in effect pursuant thereto by the commission is guilty of a class 2 misdemeanor.

B. The provisions of subsection A shall not apply to any emergency regulation or order unless or until the person so violating such regulation or order has had actual knowledge of the regulation or order.

32-516. Aestheticians; cosmetologists; cosmetic laser and IPL device use; certification; fees; definitions

A. An aesthetician or a cosmetologist who wishes to perform cosmetic laser procedures and procedures using IPL devices must:

1. Apply for and receive a certificate from the department.
2. Comply with the requirements of this section and department rules.
3. Successfully complete forty hours of didactic training as required by department rules at a department-certified training program. The program shall provide a provisional certificate to the applicant verifying the successful completion of the didactic training.
4. For hair removal, complete hands-on training that is supervised by a health professional who is acting within the health professional's scope of practice or by a laser technician who has a minimum of one hundred hours of hands-on experience per procedure. The health professional or laser technician must be present in the room during twenty-four hours of hands-on use of lasers or IPL devices. The supervising health professional or laser technician shall verify that the aesthetician or cosmetologist has completed the training and supervision as prescribed by this section.
5. For other cosmetic laser and IPL device procedures, complete a minimum of an additional twenty-four hours of hands-on training of at least ten cosmetic procedures for each type of specific procedure that is supervised by a health professional who is acting within the health professional's scope of practice or by a laser technician who has a minimum of one hundred hours of hands-on experience per procedure. The health professional or laser technician must be present in the room during twenty-four hours of hands-on use of lasers or IPL devices. The supervising health professional or laser technician shall verify that the aesthetician or cosmetologist has completed the training and supervision as prescribed by this section.
6. Submit to the department the provisional certificate from the training program and certification by the health professional or laser technician who directly supervised the applicant in the room during the hands-on training.

B. The department shall issue a laser technician certificate authorizing the aesthetician or cosmetologist to use lasers and IPL devices if the applicant has completed the training for hair removal or lasers and IPL devices for other cosmetic procedures, as applicable, and shall maintain a current register of those laser technicians in good standing and whether certification is for hair removal only or other cosmetic procedures as well. The department may establish a fee for the registration of aestheticians or cosmetologists as laser technicians and the issuance of certificates pursuant to this subsection. The department shall deposit monies collected pursuant to this subsection in the laser safety fund established by section 32-3234.

C. An aesthetician or a cosmetologist who has been certified as a laser technician by the department may use a laser or IPL device:

1. For hair removal under the indirect supervision of a health professional whose scope of practice permits the supervision.

2. For cosmetic purposes other than hair removal if the aesthetician or cosmetologist is directly supervised by a health professional whose scope of practice permits the supervision and the aesthetician or cosmetologist has been certified in those procedures.

D. The board shall investigate any complaint from the public or from another board or agency regarding a licensed aesthetician or cosmetologist who performs cosmetic laser procedures or procedures using IPL devices pursuant to this section. The board shall report to the department any complaint it receives about the training or performance of an aesthetician or a cosmetologist who is certified as a laser technician.

E. An aesthetician or a cosmetologist who used laser and IPL devices before November 24, 2009 may continue to do so if the aesthetician or cosmetologist received a certificate pursuant to this section before October 1, 2010.

F. For the purposes of this section:

1. "Department" means the department of health services.

2. "Directly supervised" means a health professional who is licensed in this state and whose scope of practice allows the supervision supervises the use of a laser or IPL device for cosmetic purposes while the health professional is present at the facility where and when the device is being used.

3. "Health professional" means a person who is licensed pursuant to either:

(a) Chapter 11, article 2 of this title and who specializes in oral and maxillofacial surgery.

(b) Chapter 13, 14, 15, 17 or 25 of this title.

4. "Indirect supervision" means supervision by a health professional who is licensed in this state, whose scope of practice allows the supervision and who is readily accessible by telecommunication.

5. "IPL device" means an intense pulse light class II surgical device certified in accordance with the standards of the department for cosmetic procedures.

6. "Laser" means any device that can produce or amplify electromagnetic radiation with wavelengths in the range of one hundred eighty nanometers to one millimeter primarily by the process of controlled stimulated emission and certified in accordance with the standards for the department for cosmetic procedures.

7. "Laser technician" means a person who is or has been certified by the department pursuant to its rules and chapter 32, article 2 of this title.

32-3233. Lasers; IPL devices; authorized use; authorized supervision

A. A health professional may register, operate and use a laser or IPL device that is registered with the department or administer drugs or devices for cosmetic purposes to the extent the use is allowed by the health professional's scope of practice and the health professional has completed any training required by the health professional's regulatory board and the department.

B. A health professional may supervise another health professional in the use of a laser or IPL device for cosmetic purposes to the extent the supervision is allowed or required by the supervising health professional's scope of practice and the supervising health professional has completed any training required by the supervising health professional's regulatory board and the department.

C. The health professional's regulatory board shall investigate any complaint from the public or another board or agency involving the training, education, supervision or use of a laser or IPL device. A health professional shall report to the department any complaint received about the training or performance of a laser technician.

D. A health professional may supervise a laser technician in the use of a laser or IPL device for cosmetic purposes if:

1. The health professional is licensed pursuant to either:

(a) Chapter 11, article 2 of this title and specializes in oral and maxillofacial surgery.

(b) Chapter 13, 14, 15, 17 or 25 of this title and the supervision is within the health professional's scope of practice.

2. The supervision does not conflict with the requirements of this article.

3. The laser technician has been certified by the department to use a laser or IPL device for hair removal or other cosmetic procedures.

E. A laser technician who wishes to perform cosmetic laser procedures and procedures using IPL devices must:

1. Successfully complete forty hours of didactic training as required by department rules at a department-certified training program. The program shall provide a provisional certificate to the applicant verifying the successful completion of the didactic training.

2. For hair removal, complete hands-on training that is supervised by a health professional who is acting within the health professional's scope of practice or by a laser technician who has a minimum of one hundred hours of hands-on experience per procedure. The health professional or laser

technician must be present in the room during twenty-four hours of hands-on use of lasers or IPL devices. The supervising health professional or supervising laser technician shall verify that the laser technician has completed the training and supervision as prescribed by this section.

3. For other cosmetic laser and IPL device procedures, complete a minimum of an additional twenty-four hours of hands-on training of at least ten cosmetic procedures for each type of procedure that is supervised by a health professional who is acting within the health professional's scope of practice or by a laser technician who has a minimum of one hundred hours of hands-on experience per procedure. The health professional or laser technician must be present in the room during twenty-four hours of hands-on use of lasers or IPL devices. The supervising health professional or supervising laser technician shall verify that the laser technician has completed the training and supervision as prescribed by this section.

4. Submit to the department the provisional certificate from the training program and certification by the health professional or laser technician who directly supervised the applicant in the room during the hands-on training.

F. The department shall issue a laser technician certificate authorizing the use of lasers and IPL devices only for hair removal if the applicant meets the applicable requirements of subsection E of this section, or for hair removal and other cosmetic procedures if the applicant meets the applicable requirements of subsection E of this section. The department shall maintain a current register of those laser technicians in good standing and whether certification is only for hair removal or for hair removal and other cosmetic procedures. The department may establish a fee for the registration of laser technicians and the issuance of certificates pursuant to this subsection. The department shall deposit monies collected pursuant to this subsection in the laser safety fund established by section 32-3234.

G. A laser technician who has been using laser and IPL devices before November 24, 2009 may continue to do so if the laser technician applies for and receives a certificate pursuant to this section before October 1, 2010.

H. A laser technician may use a laser or IPL device in the following circumstances:

1. For hair removal under the indirect supervision of a health professional whose scope of practice permits the supervision.

2. For cosmetic purposes other than hair removal if the laser technician is directly supervised by a health professional whose scope of practice permits the supervision.

I. The supervising health professional, the employer of a laser technician and the registrant who owns or operates the laser or IPL device are subject to disciplinary action by the appropriate regulatory board for any errors made by a laser technician or for the use of a laser or IPL device that is not allowed by this article. A person who employs a person who operates a laser or IPL device must report any misuse of a laser or IPL device to the operator's regulatory board and to the department.

J. The department shall investigate any complaint from a member of the public or another board or agency involving the training, education, practice or complaint of harm resulting from a laser technician performing procedures for cosmetic purposes under this article and shall take appropriate disciplinary action as necessary, including revocation of the laser technician's certification or revocation of a registrant's or employer's license to own or operate a laser or IPL device.

DEPARTMENT OF TRANSPORTATION

Title 17, Chapter 6, Article 1, General Provisions; Article 2, Special Permit Classes and Fees;
Article 3, Safety Requirements; Article 4, Transport Provisions; Article 5, Envelope Permit
Special Provisions

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - FIVE-YEAR REVIEW REPORT

MEETING DATE: July 10, 2018

AGENDA ITEM: F-2

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF TRANSPORTATION (F-18-0701)
Title 17, Chapter 6, Article 1, General Provisions; Article 2, Special Permit Classes and Fees; Article 3, Safety Requirements; Article 4, Transport Provisions; Article 5, Envelope Permit Special Provisions

This five-year review report covers 52 rules, 15 Tables, and 4 Illustrations in A.A.C. Title 17, Chapter 6, Articles 1 through 5, relating to oversize and overweight special permits issued by the Department. The Department indicates that it, along with the Overdimensional Permit Council (OPC), have promulgated the rules with input from transportation stakeholder groups such as the Department of Public Safety, local law enforcement personnel, the Arizona Trucking Association, the Specialized Carriers & Rigging Association, and other members of Arizona's trucking, heavy-haul transport, crane, utility, and escort vehicle industries.

The Department states that the rules contain reasonable permit requirements, restrictions, and allowances for transporting oversize and overweight vehicles and loads on highways under the jurisdiction of the Department. The rules include provisions related to special permit classes and fees, safety requirements, transport, and envelope permits. In September 2013, the Department completed the course of action proposed in the previous five-year review report on these rules.

Proposed Action

On September 18, 2015, the Department received permission from the Governor's Office to proceed with a rulemaking to address issues identified in this report. The Department indicates that it intends to improve the rules by consolidating permit types, eliminating permits rendered unnecessary by the consolidation process, updating statutory references and codifying the Department's new online procedures for permit application and issuance. The Department anticipates completing this proposed rulemaking by December 31, 2018.

1. Has the agency analyzed whether the rules are authorized by statute?

Yes. The Department cites to many statutes as authority for the rules, including A.R.S. § 28-366, under which the Director of the Department is required to adopt rules as deemed necessary for the collection of taxes and license fees, public safety and convenience, enforcement of the laws the Director administers or enforces, and the use of state highways and routes to prevent the abuse and unauthorized use of state highways and routes.

2. Summary of the agency’s economic impact comparison and identification of stakeholders:

The Department has determined that the economic impact of the discussed articles does not differ significantly from what was originally determined by the economic impact statement. The Department provided examples of improved services for stakeholders such as the increase in the number of permit application types available for online. The Department also notes stakeholder successes such as 3,442 permits enabling “Arizona’s four manufacturing plants to sell and deliver factory-built manufactured housing across the state in support of higher profitability and job growth.”

The primary stakeholders include the Department, Arizona DPS, political subdivisions that issue permits to oversize vehicles, commercial transporters requiring oversize permits, pilot/escort vehicle operators, businesses requiring the movement of oversize loads, private certified engineering companies, and the general public.

3. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

The Department has determined that the rules provide greater benefits than costs. The Department writes that the rules enable streamlined permit applications and easier transport for businesses in Arizona while ensuring public safety and protection of public transportation infrastructure.

4. Has the agency received any written criticisms of the rules over the last five years?

Yes. The Department indicates that it received comments from “several” members of the Specialized Carriers & Rigging Association after implementation of its 2013 rulemaking. Commenters expressed concern that the Department unintentionally eliminated a provision that was relied upon to justify eligibility for continuous travel for specialty equipment manufactured for travel with more than three feet of front overhang, such as bucket trucks, ladder trucks, and utility trucks. Excerpts of those comments, along with the Department’s responses, can be found on pages B-14 through B-16 of the report.

5. Has the agency analyzed the rules' clarity, conciseness, and understandability, consistency with other rules and statutes, and effectiveness?

Yes. The Department indicates that the rules are generally effective in achieving their objectives and are consistent with other rules and statutes.

The Department indicates that stakeholders have requested amendments that improve the clarity, conciseness, and understandability of Sections 101, 102, 103, 106, 112, 201, 202, 205, 206, 208, 211, 212, 302, 307, 401, 402, 404, 405, 406, 407, 408, 409, 411, 412, 501, and 506.

6. Has the agency analyzed the current enforcement status of the rules?

Yes. The Department indicates that the rules are enforced as written with the exception of Section 408(B). The Department has determined that enforcement of the overhang provision with the rule may cause an unreasonable burden on interstate commerce. The Department states that law enforcement officers in the state have agreed to provide temporary relief from pursuing enforcement action against any self-propelled mobile crane, drilling rig, or similar specialty equipment operator working diligently and in good faith to comply with all other Department rules regarding movement of these oversize and overweight vehicles until the Department is able to complete the rulemaking to correct the discrepancy.

7. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The Department indicates that the rules are not more stringent than federal laws related to transportation and interstate commerce.

8. For rules adopted after July 29, 2010, do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

Yes. The Department indicates that the special permits and envelope permits issued under these rules are specifically authorized by statute and are in compliance with A.R.S. § 41-1037.

9. Conclusion

The Department anticipates completing a rulemaking by December 31, 2018 to address issues identified in the report. The report meets the requirements of A.R.S. § 41-1056 and R1-6-301. Council staff recommends approval of this report.

April 18, 2018

Ms. Nicole O. Coyler, Chair
Governor's Regulatory Review Council
100 N. 15th Avenue, Suite 305
Phoenix, AZ 85007

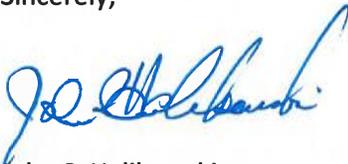
Subject: Five-year Review Report for 17 A.A.C. 6, Articles 1 through 5: Oversize and Overweight Envelope and Special Permits

Dear Ms. Coyler:

The Arizona Department of Transportation submits for Council review and approval the accompanying Five-year Review Report for 17 A.A.C. Chapter 6, Articles 1 through 5. This document complies with all requirements provided under A.R.S. § 41-1056 and A.A.C. R1-6-301. Additionally, the Department certifies full compliance with the requirements provided under A.R.S. § 41-1091.

For information regarding the report, please communicate directly with John Lindley, Senior Rules Analyst, at (602) 712-8804.

Sincerely,



John S. Halikowski
ADOT Director

Enclosure



**Government Relations and Policy
Development Office**

**Administrative Rules
Five-Year Review Report**

**A.A.C. Title 17 – Transportation
Chapter 6. Department of Transportation
Oversize and Overweight Special Permits**

**Article 1. General Provisions
Article 2. Special Permit Classes and Fees
Article 3. Safety Requirements
Article 4. Transport Provisions
Article 5. Envelope Permit Special Provisions**

***Douglas A. Ducey* *Governor*
John S. Halikowski *ADOT Director***

Submitted to the Governor's Regulatory Review Council
April 2018

**Arizona Department of Transportation
Five-year Review Report**

17 A.A.C. Chapter 6, all Articles

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Arizona Department of Transportation

Five-year Review Report

17 A.A.C. Chapter 6, All Articles

Section A

Report Summary

Arizona Department of Transportation
Five-year Review Report
17 A.A.C. Chapter 6

Report Summary

The Director of the Department of Transportation (Department) has broad authority under A.R.S. §§ 28-366 and 28-7045 to adopt rules for collection of taxes and license fees, public safety and convenience, enforcement of the provisions of the laws the Director administers or enforces, and for exercising complete and exclusive operational control and jurisdiction over the use of state highways and routes on the State Highway System, including the Interstate highways, to prevent the abuse and unauthorized use of those highways and routes.

This five-year review report covers 52 rules, 15 Tables, and 4 Illustrations in Chapter 6, Articles 1 through 5, relating to the envelope and special permits issued by the Department pursuant to A.R.S. Title 28, Chapter 3, Articles 18 and 19. The Department and the Overdimensional Permit Council have developed these rules in coordination with a broad coalition of public and private transportation stakeholder groups including the Department of Public Safety (DPS), local law enforcement personnel, Arizona's business community, the Arizona Trucking Association, the Specialized Carriers & Rigging Association and other members of Arizona's trucking, heavy-haul transport, crane, utility, and escort vehicle industries.

The Department believes that these rules reflect reasonable permit requirements, restrictions, and allowances for transporting oversize and overweight vehicles and loads on highways under the jurisdiction of the Department, while providing uniform enforcement procedures, additional vehicle size and weight standards, operational standards, agreements and compacts to facilitate the regional application and administration of vehicle size and weight standards, uniform permit procedures, uniform application forms, and regulations for the operation of oversize and overweight vehicles, including equipment requirements, driver qualification and operating practices, and such other matters as may be pertinent to meet regional needs and promote an efficient, safe and compatible transportation network.

The Department has determined that all updates promised in its previous five-year review report were completed by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013. While the rules in this Chapter are generally clear, concise, and understandable, the Department and the Overdimensional Permit Council have already begun working to improve the rules by consolidating permit types, eliminating permits rendered unnecessary by the consolidation process, updating statutory references and codifying the Department's new online procedures for permit application and issuance. On September 18, 2015, the Department received permission from the Governor's Office to proceed with rule amendments, which the Department anticipates will be completed by December 31, 2018.

Arizona Department of Transportation

Five-year Review Report

17 A.A.C. Chapter 6, all Articles

Section B

Analysis of Individual Rules and

Identical Information within Rule Groups

**Governor’s Regulatory Review Council
Five-Year-Review Report
Arizona Department of Transportation
17 A.A.C. Chapter 6, all Articles**

1. Authorization of the rule by existing statutes

General Statutory Authority:

A.R.S. Title 28, Chapter 3, Articles 18 and 19, A.R.S. § 28-1821, 23 U.S.C. 127 and 42 U.S.C. 5121

Specific Statutory Authority:

A.R.S. §§ 28-366, 28-1103, 28-1104, 28-1105, 28-5204, 28-7045, and 23 CFR 658

2. The objective of each rule:

To mitigate possible hazards and inconveniences, the Department requires envelope or special permits for transporting oversize and overweight vehicles, combinations of vehicles, or vehicle and load combinations on the State Highway System. Additionally, for all rules in this Chapter, the Department endeavors to promote more efficient and more economical transportation by oversize and overweight vehicles, combinations of vehicles, and vehicle and load combinations traveling between and within any jurisdictions participating in the Multistate Highway Transportation Agreement. The Agreement supports adopting standards that allow the operation of vehicles or vehicle and load combinations in interstate commerce as authorized under the Department’s special permitting authority for vehicle combinations in excess of the legal statutory weight of 80,000 pounds, width of 10 feet, length of 65 feet, or any combination thereof.

Article 1. General Provisions

R17-6-101	To inform industry and the motoring public that the Department, working in collaboration with the Overdimensional Permit Council as prescribed under A.R.S. § 28-1150(C)(3), requires and issues envelope and special permits as provided under A.R.S. Title 28, Chapter 3, Articles 18 and 19, and this Chapter, to authorize the safe and efficient movement of certain oversize and/or overweight vehicles or vehicle and load combinations transporting on the State Highway System. Additionally, this rule provides definitions for terms used throughout the Chapter.
R17-6-102	To inform industry and the motoring public of the dimensional threshold and maximum limits at which a vehicle or vehicle and load combination is considered legal for transport on the State Highway System without having to obtain an oversize, overweight, or oversize and overweight envelope or special permit from the Department. Additionally, this rule provides information regarding movement of equipment without a special permit for the purpose of repair or local operation and further clarifies the types of vehicles or vehicle and load combinations statutorily exempt from the special permit requirements of this Chapter.

Table 1	To provide oversize and overweight envelope and special permit applicants a quick reference chart detailing all applicable size and weight limits prescribed by statute, above which point the Department will require application for an oversize, overweight, or oversize and overweight envelope or special permit before commencement of travel on any route that is part of the State Highway System.
R17-6-103	To inform oversize and overweight special permit applicants of the methods of application available, and the documents required, for issuance of a special permit authorizing movement of an oversize and overweight vehicle or load on any part of the State Highway System.
R17-6-104	To inform class C oversize and overweight special permit applicants of the additional documentation required by the Department for issuance of a class C oversize and overweight special permit authorizing movement of an oversize, overweight, or oversize and overweight vehicle or vehicle and load combination requiring special consideration or extra precaution, on a case by case basis, due to the unique size and/or weight of the vehicle or vehicle and load combination.
R17-6-105	To inform oversize and overweight special permit applicants that a permit issued by the Department under this Chapter is valid only for movement of an oversize, overweight, or oversize and overweight vehicle or vehicle and load combination traveling on any part of the State Highway System. A special permit applicant must apply separately with other applicable political subdivisions or tribal nations for permission to operate on any county, municipal, or tribal route.
R17-6-106	To provide oversize and overweight special permit applicants with information regarding the availability of a permit extension that can be granted by the Department as provided under this Section in the event of certain unavoidable circumstances inhibiting a permit holders ability to move an oversize or overweight vehicle or load as initially planned.
R17-6-107	To inform oversize and overweight special permit holders of the authority of law enforcement personnel to confiscate an oversize or overweight special permit issued by the Department before its expiration date if the vehicle operator is found to be in violation of a provision of this Chapter or A.R.S. Title 28, Chapter 3, Article 18.
R17-6-108	To provide class C special permit applicants with information regarding the Department's process for determining whether the movement of an oversize and/or overweight vehicle, or vehicle and load combination, may involve a potential traffic safety risk warranting the preparation and submission of a comprehensive traffic control plan as a condition of permit approval. This rule provides the industry and the general public the specific criteria used by the Department when making such a determination.

R17-6-109	To provide oversize and overweight special permit applicants with information regarding the specific criteria used by the Department to determine an applicant's eligibility to receive an oversize or overweight vehicle special permit.
R17-6-110	To inform oversize and overweight special permit holders of their liability for any damage caused to a state highway by the oversize and overweight vehicle or load during transport.
R17-6-111	To inform oversize and overweight special permit holders of their right to request a hearing with the Department's administrative hearing office to appeal the Department's decision to deny, confiscate, or revoke an oversize and overweight special permit or application.
R17-6-112	To provide oversize and overweight vehicle operators with information regarding the Director's ability to authorize certain movement of oversize and overweight vehicles and load combinations without a special permit issued under this Article for purposes of relief or repair in times of an emergency affecting public welfare or safety.
R17-6-113	To provide the Department's process for ensuring that a local authority's current ordinances and rules relating to the issuance of oversize or overweight special permits are made available to the public electronically as required under A.R.S. §§ 28-1103(F) and (G).

Article 2. Special Permit Classes and Fees

R17-6-201	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the statutorily prescribed fees and the size and weight threshold used by the Department to determine eligibility for the Class A oversize or overweight special permits.
R17-6-202	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the statutorily prescribed fee and the size and weight threshold used by the Department to determine eligibility for the annual Class B oversize special permit.
R17-6-203	To provide commercial transporters of recreational vehicles with a quick reference chart reflecting the statutorily prescribed fee and the size threshold used by the Department to determine eligibility for issuance of an annual Class B, Type R, oversize recreational vehicle special permit.
R17-6-204	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the statutorily prescribed fees and the size and weight threshold used by the Department to determine eligibility for the Class C oversize or overweight special permits.
R17-6-205	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the statutorily prescribed fee and the size and weight threshold used by the Department to determine eligibility for the annual Class D oversize or overweight special permit.

R17-6-206	To provide longer combination vehicle operators with the Department’s established criteria for issuance of the Class E oversize or overweight special permits allowing reasonable access for longer combination vehicles traveling on certain designated routes.
Table 2	To provide longer combination vehicle operators with a quick reference chart reflecting the statutorily prescribed fees and the size and weight threshold used by the Department to determine eligibility for the Class E oversize or overweight special permits.
R17-6-208	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the statutorily prescribed fees and the size and weight threshold used by the Department to determine eligibility for the Class G overwidth special permits.
R17-6-209	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the statutorily prescribed fee and the size and weight threshold used by the Department to determine eligibility for the annual Class H overwidth watercraft special permit.
R17-6-210	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the statutorily prescribed fees and the size and weight threshold used by the Department to determine eligibility for an oversize and/or overweight envelope permit.
R17-6-211	To provide oversize and overweight transport industry representatives with information regarding the availability of multi-state Western Regional Permits issued by the Department under the “Western Regional Agreement for the Issuance of Permits for Oversize and Overweight Vehicles Involved in Interstate Travel.”
R17-6-212	To provide oversize and overweight vehicle operators and transport industry representatives with information regarding the availability of special permits authorizing transport of a vehicle or vehicle and load combination that uses extra axles to achieve higher weights of up to 60,000 lbs. per tridem axle group, subject to the routes and restrictions provided under Tables 6 and 7.
Table 6	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the routes authorized by the Department for transporting a vehicle or vehicle and load combination using tridem axle group weight distribution as provided under Table 7.
Table 7	To provide oversize and overweight special permit applicants with a quick reference chart reflecting the maximum permitted weight computations allowed on any vehicle or vehicle and load combination that uses tridem axle group configurations to attain higher weights by distributing the weight across one or more groups of axles.

Article 3. Safety Requirements

R17-6-301	To inform oversize and overweight special permit holders of their statutory obligation to observe all applicable safety requirements for motor carriers operating in Arizona as prescribed under 49 CFR as incorporated by reference under A.A.C. R17-5-202 through R17-5-209.
R17-6-302	To inform permittees and drivers of their lawful obligation to ensure appropriate placement of warning flags on overwidth and overlength vehicles or vehicle and load combinations before commencing transport on the State Highway System.
III. 1	To illustrate appropriate placement of warning flags on overwidth and overlength vehicles or vehicle and load combinations before commencing transport on the State Highway System.
R17-6-303	To inform oversize and overweight vehicle operators of their obligation to ensure that an oversize and overweight special permitted vehicle and load combination displays an appropriate “OVERSIZE LOAD” sign as applicable for travel on a state highway under the jurisdiction of the Department.
III. 2	To inform oversize and overweight vehicle operators of the applicable specifications for the “OVERSIZE LOAD” sign required by the Department to be displayed on an oversize and overweight special permitted vehicle and load combination for travel on a state highway under the jurisdiction of the Department.
R17-6-304	To inform oversize and overweight vehicle operators of their obligation to ensure that an oversize and overweight special permitted vehicle and load combination displays appropriate lighting for travel on a state highway under the jurisdiction of the Department.
III. 4	To provide oversize and overweight special permit applicants with examples of the typical warning light configurations required by law for the safe transport of any load with excessive width or overhang on a highway under the jurisdiction of the Department.
R17-6-305	To inform oversize and overweight special permit holders of their obligation to ensure appropriate escort accompaniment while transporting an oversize and overweight vehicle and load combination on a state highway under the jurisdiction of the Department.
R17-6-306	To inform oversize and overweight special permit holders of their obligation to ensure an appropriate level of traffic control while transporting certain oversize and overweight vehicle and load combinations on a state highway under the jurisdiction of the Department.
R17-6-307	To inform oversize and overweight special permit holders of their obligation to ensure that a load projecting from an oversize and overweight vehicle and load combination remains within acceptable limits while transporting on a state highway under the jurisdiction of the Department.
R17-6-308	To inform overheight special permit holders of their obligation to ensure appropriate communication with all applicable utility companies before attempting to transport certain overheight vehicle and load combinations.

Article 4. Transport Provisions

R17-6-401	To provide oversize and overweight special permit holders with general transport restriction information regarding highway operation of an oversize and overweight vehicle and load combination.
R17-6-402	To inform oversize and overweight special permit holders of their obligation to ensure that the oversize and overweight special permitted vehicle and load combination is operated only within the posted speed limit or as additionally restricted by the Department to prevent traffic hazards or damage to state highways under the jurisdiction of the Department.
R17-6-403	To inform oversize and overweight special permit holders of their obligation to ensure that travel on state highways under the jurisdiction of the Department does not occur during any unsafe condition provided under this Section.
R17-6-404	To inform oversize and overweight special permit holders of their obligation to ensure that movement of certain oversize and overweight vehicle and load combinations does not take place during rush hour on any state highway under the jurisdiction of the Department specifically designated under this Section.
R17-6-405	To inform oversize and overweight special permit holders of their obligation to ensure that oversize and overweight vehicle and load combinations within certain dimensions are not moved on a state highway under the jurisdiction of the Department on a Saturday or Sunday except as specifically prescribed under this Section.
R17-6-406	To inform oversize and overweight special permit holders of their obligation to ensure that oversize and overweight vehicle and load combinations exceeding certain dimensions are not moved on a state highway under the jurisdiction of the Department on a holiday as prescribed under this Section.
R17-6-407	To inform oversize and overweight special permit holders of a weekend and holiday transport restriction exception applicable only for the movement of certain oversize and overweight vehicle and load combinations transporting personal watercraft within specific dimensions, and on designated routes, as specifically prescribed under this Section.
R17-6-408	To provide oversize and overweight special permit holders with information regarding the specific criteria used by the Department to determine an applicant's eligibility to receive an oversize or overweight vehicle special permit allowing continuous travel on a state highway under the jurisdiction of the Department.
R17-6-409	To provide oversize and overweight special permit holders with information regarding the specific criteria used by the Department to determine an applicant's eligibility to receive an oversize or overweight vehicle special permit allowing night-time travel on a state highway under the jurisdiction of the Department.

R17-6-410	To provide a quick size and weight reference chart and other criteria for transporters towing manufactured homes.
R17-6-411	To provide information for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the appropriate axle spacing necessary for excess weight distribution across multiple groups of axles. The Department's axle spacing Tables are an expansion of the Federal Bridge Formula B weights authorized by the Federal Highway Administration and A.R.S. § 28-1100 for use on the National Highway System.
Table 3.01	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>8' 0"</u> in width.
Table 3.02	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>8' 3"</u> in width.
Table 3.03	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>8' 6"</u> in width.
Table 3.04	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>8' 9"</u> in width.
Table 3.05	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>9' 0"</u> in width.
Table 3.06	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>9' 3"</u> in width.
Table 3.07	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>9' 6"</u> in width.
Table 3.08	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>9' 9"</u> in width.
Table 3.09	To provide a quick reference chart for use by oversize and overweight special permit applicants, Department personnel, and law enforcement officers to determine the maximum allowable weight computations for a group of axles <u>10'</u> in width.

III. 3	To provide a quick reference chart for Department and oversize and overweight special permit applicant use in determining the maximum allowable weight computations of a given axle group.
R17-6-412	To provide a quick reference chart for Department and oversize and overweight special permit applicant use in determining what permanent highway restrictions are applicable to each specific route.
Table 4	To provide a quick reference chart for Department and oversize and overweight special permit applicant use in determining what permanent highway restrictions are applicable to each specific route.
R17-6-413	To provide the application procedure and other criteria needed by an oversize and overweight houseboat transporter to obtain an appropriate route specific oversize and overweight special permit.
Table 5	To provide the Page-Lake Powell area highway routes applicable to the provisions of oversize and overweight houseboat movement under R17-6-413.
R17-6-414	To provide class A oversize and overweight special permit holders transporting a personal watercraft load of up to 12' in width an exception from the weekend and holiday transport restrictions provided under R17-6-405 and R17-6-406 if transporting within 10 miles of certain Arizona lakes.

Article 5. Envelope Permit Special Provisions

R17-6-501	To prescribe the specific records envelope permit holders are required to retain and make available for inspection as provided under A.R.S. § 28-1149.
R17-6-502	To provide envelope permit holders with additional information regarding the Department's process for assigning points for envelope permit violations as prescribed under A.R.S. § 28-1147.
R17-6-503	To provide envelope permit holders with additional information regarding the Department's process for initiating suspension and revocation of envelope permits as prescribed under A.R.S. § 28-1147.
R17-6-504	To provide envelope permit holders with additional information regarding the Department's process for notifying the permit holder for point assessment, denial, suspension, or revocation of an envelope permit and provide notice of the permit holder's right to a hearing as prescribed under A.R.S. § 28-1147.
R17-6-505	To provide envelope permit holders with additional information regarding the permit holder's eligibility to reapply for an envelope permit after a denial or revocation.

R17-6-506	To provide houseboat haulers operating within 10 miles of the Page-Lake Powell area with information regarding the availability, application, and issuance requirements for envelope permits authorizing transport of vehicles hauling houseboats under A.R.S. § 28-1144(B).
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3. **Are the rules effective in achieving their objectives?** Yes No

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation
N/A	N/A

4. **Are the rules consistent with other rules and statutes?** Yes No

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation
N/A	N/A

5. **Are the rules enforced as written?** Yes No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency's proposal for resolving the issue.

Yes, but with one exception:

Rule	Explanation
R17-6-408(B)	<p>The Department has determined that enforcement of the overhang provision of this Section limiting a self-propelled mobile crane, drilling rig, or similar specialty equipment operator's ability to qualify for the continuous travel allowance may cause an unreasonable burden on interstate commerce. Therefore, this Section is not being enforced as written (see item 7).</p> <p>The Department has notified all Arizona law enforcement personnel that the previous amendments to this Section inadvertently removed the crane industry's ability to qualify for the continuous travel allowance. Arizona law enforcement officers have agreed to provide temporary relief from pursuing enforcement action against any self-propelled mobile crane, drilling rig, or similar specialty equipment operator working diligently and in good faith to comply with all other Department rules regarding movement of these oversize and overweight vehicles until the Department is finally able to complete formal rulemaking to correct the discrepancy.</p> <p>The Department's draft rulemaking to correct this issue is currently being reviewed by the Overdimensional Permit Council and the Department anticipates completion of the rule correction by December 2018. The draft rulemaking makes it clear that the term "continuous travel" includes self-propelled mobile cranes, drilling rigs, and similar specialty equipment</p>

	not exceeding 11 feet in width as long as all other dimensions are within the size and weight thresholds provided for continuous travel under R17-6-408.
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6. **Are the rules clear, concise, and understandable?** Yes ___ No X

If not, please identify the rule(s) not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Representatives of the heavy-haul and oversize and overweight transport industries have requested that the Department further clarify these rules by making minor technical corrections that may provide additional regulatory relief for some of the industry and ensure that the rules are more clear, concise, and understandable.

Rule amendments, technical corrections, and clarifying changes requested and considered by the Department since its oversize and overweight special permit rules were last amended on August 16, 2013, include:

Rule	Explanation
R17-6-101	Removing the outdated address from the definition of “Arizona Central Commercial Permits Office;”
R17-6-101	Clarifying the term “continuous travel” to include self-propelled mobile cranes, drilling rigs, or similar specialty equipment not exceeding 11 feet in width as long as all other dimensions are within the size and weight thresholds provided for continuous travel under R17-6-408;
R17-6-101	Defining the term “long single-trailer combination” as applicable to the class E special permit currently issued by the Department under A.R.S. 28-1103(A), for reducible vehicle and load combinations traveling on Interstate 15, and other select routes located within 20 miles of Arizona’s northernmost border, as provided under R17-6-206, Table 2;
R17-6-101	Updating the statutory reference in the definition of “mobile home” to reflect changes made by Laws 2016, Ch. 128, §§ 19 through 21 (SB1530), which renumbered A.R.S. § 41-2142 to A.R.S. § 41-4001;
R17-6-101	Clarifying the term “National Network,” as used in these rules, to mean the specific federally-designated network of highways where reducible vehicles or vehicle and load combinations within certain size and weight limits may be granted reasonable access to Interstate 15, and other select routes located within 20 miles of Arizona’s northernmost border, as provided under R17-6-206, Table 2;
R17-6-101	Correcting outdated statutory references;
R17-6-101	Clarifying the term “State Highway System,” as used in these rules, to mean the much broader system or network of highways consisting of all state routes and state highways owned, operated, and maintained by the Department, as designated by the Transportation Board under A.R.S. § 28-304(B)(2), including all U.S. routes and Interstate highways located throughout the state;

R17-6-102	Updating Table 1, Threshold Dimensions, to reflect the new legal thresholds provided under the federal “Fixing America’s Surface Transportation Act” or “FAST Act” and Laws 2016, Ch. 52 (HB2251);
R17-6-103	Streamlining, and combining into one Section, all general application procedures required for obtaining each class of special permit, including those available for online application;
R17-6-103	Providing clarification on what vehicles, or vehicle and load combinations, the Department will consider non-reducible under state and federal law for special permit issuance;
R17-6-106	Updating the special permit extension process for use when movement of a vehicle or vehicle and load combination is delayed due to mechanical failure or inclement weather;
R17-6-112	Updating the procedures necessary to obtain state or federal authorization for conducting emergency operations to provide relief or repair during an emergency or disaster;
R17-6-201	Adding a class A annual permit option and a 30-day permit option (provided by Laws 2014, Ch. 60), to increase the number of applicants that qualify for issuance of the more desirable class A special permit in-lieu of purchasing a class B Annual, class B - Type R - Oversize Recreational Vehicle, class D - Crane, class G - Overwidth General, or class H - Overwidth Watercraft special permit;
R17-6-202	Eliminating the class B Annual, class B - Type R - Oversize Recreational Vehicle, class D - Crane, and class H - Overwidth Watercraft special permits, since the class A special permits will now accommodate all dimensions and permit options previously only available under separate permit classes;
R17-6-205	Adding a 30-day class A - Crane special permit option for self-propelled mobile cranes, drilling rigs, and similar specialty equipment;
R17-6-205	Adding a special continuous travel allowance to accommodate self-propelled mobile cranes, drilling rigs, or similar specialty equipment traveling under a class A - Crane special permit at no more than 11’ in width, 14’ 6” in height, 10’ in length of front overhang, and 10’ in length of rear overhang;
R17-6-206	Consolidating the gross weight categories permitted for reducible vehicle and load combinations traveling under a class E special permit in conformance with legislative changes provided by Laws 2014, Ch. 60 (HB2430);
R17-6-206	Clarifying that the class E special permit currently issued by the Department under A.R.S. 28-1103(A), for transporting a long single-trailer combination with a reducible load on Interstate 15, may also be issued to include other highways under the jurisdiction of the Department as listed under R17-6-206, Table 2;
R17-6-208	Repealing the class G - Overwidth General special permit, since the class A special permits will now accommodate all dimensions and permit options previously only available under separate permit classes;

R17-6-211	Making technical and conforming changes required under the Western Regional Agreement to promote uniform laws and regulations adopted by the Policy Committee of the Western Association of State Highway and Transportation Officials (WASHTO) in June 2004, updated March 2009, for governing truck size and weight configurations throughout the Western Region of the United States;
R17-6-212	Repealing R17-6-212, Tables 6 and 7, since tridem axle group configurations are now allowed 60,000 pounds per tridem axle group on all routes under the jurisdiction of the Department, unless otherwise restricted under R17-6-412, Table 4;
R17-6-302	Providing illustrations of the warning flag configurations and safety lighting device requirements for vehicles or loads extending more than four feet beyond the front of a vehicle;
R17-6-307	Consolidating all general escort vehicle accompaniment requirements into one Section for better clarity;
R17-6-401	Combining R17-6-401, General Highway Operations and R17-6-402, Speed Restriction;
R17-6-401	Adding a reference to the general highway operations requirements under R17-6-401 to remind permittees and drivers issued a multiple trip oversize or overweight special permit or envelope permit to access and review the most current information on highway-specific restrictions, requirements, conditions, and allowances indicated on the Department's web site prior to commencing transport, as currently required under R17-6-412;
R17-6-402	Repealing this Section relating to speed restrictions after merging with R17-6-401, General Highway Operations;
R17-6-404	Removing all curfew routes and restrictions from the Yuma metropolitan area and updating routes for metropolitan Phoenix and Tucson;
R17-6-404	Providing clearer references to the thresholds at which a vehicle or a self-propelled mobile crane, drilling rig, or similar specialty equipment becomes subject to the metropolitan curfew transport allowance and restrictions provided under R17-6-404;
R17-6-405	Combining R17-6-405, Weekend Transport and R17-6-409, Night Transport;
R17-6-406	Repealing this Section relating to holiday transport after merging with R17-6-408, Continuous Travel;
R17-6-407	Providing clarification on route-specific and permit-specific transport restrictions deemed necessary by the Department for vehicles or vehicle and load combinations over 14 feet in width, or that exceed the allowable axle group weights, who request transport on a Friday using certain routes that routinely experience a higher traffic volume on Fridays;
R17-6-408	Combining R17-6-408, Continuous Travel and R17-6-406, Holiday Transport;
R17-6-409	Repealing this Section relating to night transport after merging with R17-6-405, Weekend Transport;

R17-6-411	Updating for clarity and consistency with current statute all Maximum Permitted Weight Computation Tables for Overweight Axle Groups used for maximizing the amount of weight allowed when using wider tires on axle group configurations with two or more axles;
R17-6-412	Updating the bridge height restrictions and allowances in Table 4 and expanding the number of routes that can now accommodate oversize and overweight vehicles, combinations of vehicles, or vehicle and load combinations with tridem axle group configurations;
R17-6-501	Renumbering several rules in Article 5 to provide greater clarity and consistency throughout the Article by allowing the Department to insert definitions, a general application process, and other requirements specifically applicable to envelope permit applications; and
R17-6-506	Clarifying that the general term “houseboat,” as used under A.R.S. § 28-1144(B), and R17-6-506, encompasses all large non-specific and non-reducible watercraft models transported by an envelope permit holder, including a yacht.

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No

If yes, please fill out the table below:

Commenter	Comment	Agency’s Response
Specialized Carriers & Rigging Association	On implementation of final rulemaking, located at 19 A.A.R. 2486, August 16, 2013, and effective September 7, 2013, the Department was contacted by several members of the Specialized Carriers & Rigging Association, who reported that the continuous travel allowance previously provided under R17-6-408(B) for self-propelled mobile cranes, drilling rigs, and similar specialty equipment was changed from a 10 foot front or rear overhang allowance to a 3 foot front and 10 foot rear overhang allowance. However, by changing that language the Department inadvertently eliminated a variable overhang length consideration routinely used by the industry to justify eligibility for continuous travel previously relied on for movement of specialty equipment specifically manufactured for travel with more than three feet of front overhang (i.e., a bucket trucks, ladder trucks, utility trucks, etc.).	In changing the language of the rule, the Department intended to expand the continuous travel allowance for all vehicles by allowing overhang of up to 13 feet (previously only 10 feet) as long as 10 feet of the overhang projected to the rear of the vehicle. The Department and the Overdimensional Permit Council have drafted proposed rulemaking in coordination with a broad coalition of public and private transportation stakeholder groups including the Department of Public Safety (DPS), local law enforcement personnel, Arizona’s business community, the Arizona Trucking Association, the Specialized Carriers & Rigging Association and other members of Arizona’s trucking, heavy-haul transport, crane, utility, and escort vehicle industries. The draft proposed rulemaking corrects all concerns

		<p>expressed by the Specialized Carriers & Rigging Association members and provides a new continuous travel allowance made specifically applicable for movement of self-propelled mobile cranes, drilling rigs, and similar specialty equipment with no more than 20 feet of overhang (10 feet to the front and 10 feet to the rear) while traveling under a class A - Crane oversize or overweight envelope or special permit.</p> <p>The Overdimensional Permit Council plans to discuss the draft proposed rules at their next scheduled meeting.</p>
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The following excerpts were taken from comments the Department received from members of the Specialized Carrier & Rigging Association after the publication of final rulemaking located at 19 A.A.R. 2486, August 16, 2013, and effective September 7, 2013:

“The 10ft overhang and continuous travel and weekend travel were left out of the permit revised rules. I feel that this was an oversight that needs to be corrected. The history of this use would show a Safety benefit. Without the correction the cost to the industry and to the Public would be higher and not necessary.” ~ Dan Mardian Jr., Mardian Equipment

“Mr. Lindley, this is a disaster in the making. We service food stores, malls, cell towers, homeowners, highway sign work and hundreds of other companies that need to do A/C change outs, cell service, weekend work, emergency response and it is a huge cost increase and burden to these customers to not be able to schedule our crane work at night, on weekends and on short notice. I respectfully request you act immediately to reverse the front overhang rule and bring it back to what it was prior to the new ruling. We desperately need that in order to stay in business. Our customers need it too.” ~ Norbert Lawson, Hook Crane Service

“We as an industry must be able to have continuous travel, nights, weekends, and holidays. Restricting nights, weekends, is a major economic hardship and will be a major concern for not only our industry but also all the utility, drilling, tree trimming companies etc. We have had the 10 ft front and 10 ft rear overhang for many years without any problems, incidents or issues. Please change the overhang back to the original 10 ft front and 10 ft rear as soon as possible. The mistake is already causing issues with customers and will continue to have a negative economic effect on our industry.” ~ Shane Kemper, Crane Rental Service, Inc.

“The new restrictions would limit travel to daylight and weekday travel only. With night time restrictions and now having to sit out curfew... [t]he only hours of operation are 9:00 am to 4:00 pm that's only 7 hours a day! While a larger crane with 10 foot of rear overhang or less enjoys continuous travel on nights, weekends and holidays, and if it is under 10 feet wide has no curfew. This will have a huge negative impact on how we conduct business in Arizona and, impact every market commercial or residential.” ~ Shelton Hembree, Maxim Crane Works.

8. Economic, small business, and consumer impact comparison:

The economic impact of these rules has been the same as estimated in the economic impact statement prepared on the last amendment of the rules. However, since the Department’s last rulemaking the number of permit types available for online application have increased. The Department’s new online permitting system creates a one-stop, self-service tool for commercial motor carriers and transporters to obtain the necessary permits while also receiving up-to-date validation of routing information and roadway travel restrictions.

Stakeholder groups having an interest in these rules include:

American Association of State Highway and Transportation Officials (AASHTO)	Manufactured Housing Institute
American Trucking Association (ATA)	National Pilot Car Association (NPCA)
Arizona Department of Transportation (ADOT)	National Pilot Car Safety Institute
Arizona Department of Public Safety (DPS)	Owner Operator Independent Drivers Association (OOIDA)
Arizona Trucking Association (AzTA)	Pilot/Escort Vehicle Operators (PEVO)
Commercial transporters requiring oversize and overweight permits	Political subdivisions that issue permits to oversize and overweight vehicles operating on local roadways other than the state highway system
Commercial Vehicle Safety Alliance (CVSA)	Private certified engineering companies
Manufactured Housing Industry of Arizona (MHIA)	Specialized Carrier and Rigging Association (SC&RA)

Each year, the Department issues more than 250,000 permits for various purposes to 3,000 commercial motor carriers and transporters operating in Arizona. In calendar year 2017, the Department issued the following envelope and oversize and overweight special permits through its new online permitting system:

Permit Classification	# Permits Issued CY 2017	Highway User Revenue Fund (except as noted *)
30 Cranes (Class D)	264	\$ 19,725

30 Day Envelope Houseboat	0	\$ 0
30 Day Envelope OS	27	\$ 2,850
30 Day Envelope OS/OW	5	\$ 1,000
30 Day General Class A OS	6,321	\$ 187,800
30 Day General OS/OW Class A	5,474	\$ 404,475
30 Day General Use	44,290	\$ 660,300
30 Day LCV Category B	2	\$ 150
30 Day LCV Category C	258	\$ 18,525
30 Day LCV Category D	675	\$ 49,650
30 Day OS Only RV (Class B Type R)	1,143	\$ 33,990
30 Day Only Excluding Cranes and Drilling (Class B)	9	\$ 270
30 Day OW I-19 83,000	0	\$ 0
Annual Cranes (Class D)	210	\$ 114,025
Annual Envelope Houseboat	18	\$ 18,000
Annual Envelope OS	288	\$ 166,350
Annual Envelope OS/OW	876	\$ 865,725
Annual LCV Category A	0	\$ 0
Annual LCV Category B	18	\$ 5,760
Annual LCV Category C	894	\$ 310,320
Annual LCV Category D	474	\$ 237,600
Annual OS Only RV (Class B Type R)	182	\$ 64,800
Annual Only Excluding Cranes and Drilling (Class B)	56	\$ 14,760
Annual Watercraft (Class H)	77	\$ 3,195
Class G 30 Day	1	\$ 30
Class G Annual	0	\$ 0

Class G Single Trip	21	\$ 315
Single Trip General OS Class A	28,504	\$ 423,885
Single Trip General OS Class C	1,251	\$ 36,550
Single Trip General OS/OW Class A	10,360	\$ 766,725
Single Trip General OS/OW Class C	2,483	\$ 262,978
Single Trip Houseboat	43	\$ 4,300
Single Trip LCV Category B	0	\$ 0
Single Trip LCV Category C	27	\$ 1,875
Single Trip LCV Category D	7	\$ 525
Single Trip Max Tridem OS/OW Class C	969	\$ 86,025
Single Trip Mobile Home Easy C	2,030	\$ 60,645
Single Trip Mobile Home OS Class A	8,965	\$ 133,905
Single Trip Mobile Home OS Class C	179	\$ 5,150
Single Trip Border OW Produce 90,800 (State Highway Fund)*	44,385	\$ 3,267,601
Single Trip Western Regional OS/OW	3	\$ 223
Totals	160,789	\$ 8,230,002

Additionally, the Manufactured Housing Institute, a national trade organization representing the factory-built housing industry, recently reported that shipments from Arizona's four manufacturing plants reached 1,721 units in Calendar Year 2017 (Source: Institute for Building Technology and Safety (IBTS)). From this data, we may deduce that at least 3,442 of the 11,174 total permits issued by the Department for the economical movement of mobile homes across the state in CY 2017, enabled Arizona's four manufacturing plants to sell and deliver factory-built manufactured housing across the state in support of higher profitability and job growth. Arizona's manufactured housing industry reports that Arizona families purchased over 4,200 new (1,800) and preowned (2,400) manufactured homes in Calendar Year 2017, and manufactured housing industry statistics report over 2,500 businesses in the industry currently provide jobs to over 5,000 employees in the state.

In addition to the significant economic benefits enjoyed by the manufacturers, the process of safely and efficiently moving oversize and overweight manufactured homes or factory-built buildings often requires services provided by other industry partners, such as traffic engineering and planning firms or escort vehicle operators. The rules provided under R17-6-305 support federal regulation uniformity and certification reciprocity for Arizona's escort

vehicle operators and, consistent with A.R.S. 28-1110, support a decrease in regulatory burden on escort vehicle operators who relocate to Arizona after achieving escort vehicle operation certification in another state.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes ___ No X

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**
Yes X No ___ *Please state what the previous course of action was and if the agency did not complete the action, please explain why not.*

The Department's previously stated course of action involved working closely with the Overdimensional Permit Council, local law enforcement personnel, and other representatives of the regulated community to amend these rules by December 31, 2008. The rule amendments provided further clarification on existing processes to ensure public safety, corrected outdated information and statutory references, and ensured that the rules were clear, concise, and understandable.

The Department completed the course of action indicated in its previous five-year review report by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to persons regulated by the rule, including paperwork and other compliance costs necessary to achieve the underlying regulatory objectives:**

Many of the rule amendments, anticipated by the Department under item 14, support the recent expansion of the Department's online permitting system. Previously, oversize and overweight permits were only available from Arizona ports of entry and the Department's two central permitting offices. However, because the Department's antiquated permitting processes required that a Department employee always be available to complete the permitting process, permit holders were not always able to receive real-time information on routing or roadway travel restrictions, which sometimes led to unplanned, unnecessary, and costly delays in travel for all highway users.

The Department has determined that the benefits of the oversize and overweight envelope and special permit rules in this Chapter far outweigh the costs. The rules enable ease of transport for businesses operating in this state and ensure an appropriate amount of oversight to protect the public safety, facilitate commerce, and protect the public investment in transportation infrastructure. In conformance with the Governor's Executive Order 2018-02, these rules and any anticipated rule amendments identified under item 6 of this report will:

- Support economic development, and economic expansion;
- Reduce or ameliorate regulatory burdens while achieving the same regulatory objectives;
- Prevent a significant threat to public safety; and
- Ensure compliance with applicable federal statutory and regulatory requirements in support of the Department's ability to qualify for federal highway funding.

The rules modify the Department’s issuance criteria for class A special permits to accommodate all vehicles, or vehicle and load combinations, previously only eligible for a class B, class B-Type R, class D, or class G special permit. The Department’s recent efforts to streamline and reduce all permit application processes by better utilizing technology has resulted in the modernization of all permitting processes, the elimination of several unnecessary permit types, the reduction of timeframes necessary for permit application and issuance, and greater overall efficiency for both the Department and permit applicants. The Department determined that the broader class A special permit, which is the permit least restrictive and most desired by industry representatives, will sufficiently encompass all specific non-reducible vehicles, combinations of vehicles, or vehicle and load combinations with dimensions that do not exceed the limitations provided under R17-6-201, or the maximum permitted weight computations provided under R17-6-411. The class B, class B-Type R, class D, and class G special permits are no longer necessary and will be eliminated.

12. Are the rules more stringent than corresponding federal laws? Yes ___ No X

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

These rules provide commercial motor vehicle owners, operators, and drivers with reasonable access to all state and federal highways and routes under the jurisdiction of the Department for interstate and intrastate operations subject to numerous federal laws and regulations designed to facilitate commerce and protect the public investment in transportation infrastructure. The following federal regulations are applicable to the subject matter of the rules, but the rules are not more stringent than any applicable federal law: 23 CFR 658, Appendix C of 23 CFR 658, 49 CFR 393.5, 49 CFR 393.11, and Table 1 of 49 CFR 393.11. All transporters subject to these rules are additionally subject to all other federal and state motor carrier safety and hazardous materials regulations currently applicable to all Arizona motor carriers.

These rules also conform with the Multistate Highway Transportation Agreement provided under A.R.S. Title 28, Chapter 6, Article 2, by promoting uniform laws and regulations adopted by the Policy Committee of the Western Association of State Highway and Transportation Officials (WASHTO) in June 2004, updated March 2009, for governing truck size and weight configurations throughout the Western Region of the United States.

Additionally, the rules are subject to review by the U.S. Secretary of Transportation, as provided under 49 U.S.C. 31141, Review and Preemption of State Laws and Regulations. If the U.S. Secretary of Transportation decides that a state law or regulation is less stringent than a regulation prescribed by the Secretary under 49 U.S.C. 31136, the state law or regulation may not be enforced. However, the “grandfather” provisions in the Federal-Aid Highway Act amendments of 1974, allow the Department to continue issuing special permits using the less stringent maximum permitted weight computations provided under R17-6-411, and Tables 3.01 through 3.09, for movement of a non-reducible vehicle or load under these rules since the Tables were enacted prior to the date of enactment of the Federal-Aid Highway Amendments of 1974 and yield higher weights for groups of axles spaced within 3 feet 5 inches and 18 feet. The Department’s axle spacing Tables are an expansion of the Federal Bridge Formula B weights authorized by the Federal Highway Administration and A.R.S. § 28-1100 for use on the National Highway System

and are used by the trucking industry for determining the axle spacing needed to appropriately distribute excess weight across multiple groups of axles.

13. For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:

Each special permit or envelope permit provided by the Department under these rules is specifically authorized by statute and falls within the criteria provided under A.R.S. § 41-1037.

The oversize, overweight, or oversize and overweight special permits issued under these rules are “general permits” in that each permittee issued a particular class of permit is subject to the same activities, practices, requirements, and restrictions applicable to that permit type. However, after completing the few amendments identified by the Department under item 6, the Department’s class A special permits will more closely meet the general permit requirement provided under A.R.S. § 41-1037. The Department intends to eliminate the class B, class B-Type R, class D, and class G special permits to reduce the number of special permit types, classes, and categories an applicant must consider when applying for permission to transport a vehicle, or vehicle and load combination, using highways maintained by the Department. However, all unexpired permits will continue to be valid until expiration.

The envelope permits issued under these rules are “general permits” in that each permittee issued an envelope permit is subject to the same activities, practices, requirements, and restrictions applicable to all other envelope permit holders. The Department’s envelope permits can only be issued for non-reducible loads meeting the strict envelope dimensional criteria provided under A.R.S. § 28-1141, which allows motor carrier transporters unlimited trips and load changes within the permit’s validity period, restricts operation to certain routes, and excludes the transporting of a mobile home.

14. Proposed course of action

If possible, please identify a month and year by which the agency plans to complete the course of action.

On September 22, 2015, the Department received permission from the Governor’s Office to proceed with rulemaking on this Chapter. The Department intends to complete all of the necessary rule amendments by final rulemaking before December 31, 2018.

TITLE 17. TRANSPORTATION

CHAPTER 6. DEPARTMENT OF TRANSPORTATION
OVERSIZE AND OVERWEIGHT SPECIAL PERMITS

Editor's Note: 17 A.A.C. 6, consisting of Articles 1 through 5, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

ARTICLE 1. GENERAL PROVISIONS

Article 1, consisting of Sections R17-6-101 through R17-6-112, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

Section	
R17-6-101.	General Provision; Definitions; Time of Day
R17-6-102.	Threshold Dimensions; Special Permit Exemptions
Table 1.	Threshold Dimensions
R17-6-103.	General Application Procedure for Special Permits
R17-6-104.	Additional Special Permit Requirements and Restrictions; Engineering Analysis
R17-6-105.	Special Permit Limitation
R17-6-106.	Special Permit Extension
R17-6-107.	Special Permit Confiscation
R17-6-108.	Traffic Control Plan
R17-6-109.	Special Permit Denial
R17-6-110.	Liability
R17-6-111.	Administrative Hearing
R17-6-112.	Emergency Operation Provision
R17-6-113.	Electronic Access to Local Permit Ordinances and Rules

ARTICLE 2. SPECIAL PERMIT CLASSES AND FEES

Article 2, consisting of Sections R17-6-201 through R17-6-210, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

Section	
R17-6-201.	Class A Oversize and Overweight Special Permits - Specified Non-reducible Vehicle, Load, or Combination
R17-6-202.	Class B Oversize Special Permit - Specified Non-reducible Vehicle and Load Combination
R17-6-203.	Class B - Type R Oversize Recreational Vehicle Special Permit - Commercial Transport
R17-6-204.	Class C Oversize and Overweight Special Permits - Specified Non-reducible Vehicle, Load, or Combination Over Class A Limits
R17-6-205.	Class D Oversize and Overweight Special Permit - Self-propelled Mobile Crane, Drilling Rig, or Similar Specialty Equipment
R17-6-206.	Class E Oversize and Overweight Special Permits - Reducible Multiple Trailer LCVs
Table 2.	Class E LCV Special Permit and Issuance Criteria
R17-6-207.	Repealed
R17-6-208.	Class G Overwidth Special Permits - Specified Vehicle or Combination with Reducible Load Over Legal Width
R17-6-209.	Class H Overwidth Special Permit - Specified Vehicle and Watercraft Load Combination
R17-6-210.	Envelope Permits - Non-specific and Non-reducible Vehicle or Load
R17-6-211.	Western Regional Permit
R17-6-212.	Class C Overweight, or Oversize and Overweight, Special Permit - Tridem Axle Group Configurations
Table 6.	Class C Overweight, or Oversize and Overweight, Special Permit Routes and Restrictions for Tridem Axle Group Configurations

Table 7.	Maximum Permitted Weight Computations: Tridem Axle Group Configurations
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ARTICLE 3. SAFETY REQUIREMENTS

Article 3, consisting of Sections R17-6-301 through R17-6-308, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

Section	
R17-6-301.	General Safety Requirements
R17-6-302.	Warning Flag Requirements
Ill. 1.	Warning Flag Configurations
R17-6-303.	Sign Requirements
Ill. 2.	"OVERSIZE LOAD" Sign
R17-6-304.	Lighting Device Requirements
Ill. 4.	Safety Lighting Configurations
R17-6-305.	Escort Vehicles
R17-6-306.	Traffic Control Provisions
R17-6-307.	Projecting Load or Vehicle
R17-6-308.	Permittee or Driver Obligation to Notify Utility Companies of Overheight Transport

ARTICLE 4. TRANSPORT PROVISIONS

Article 4, consisting of Sections R17-6-401 through R17-6-412, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

Section	
R17-6-401.	General Highway Operations
R17-6-402.	Speed Restriction
R17-6-403.	Weather Restrictions; Hazardous Conditions
R17-6-404.	Metropolitan Curfew Transport Restriction
R17-6-405.	Weekend Transport Allowance
R17-6-406.	Holiday Transport Restriction
R17-6-407.	Route-specific and Permit-specific Transport Restrictions
R17-6-408.	Continuous Travel
R17-6-409.	Night Transport Restriction
R17-6-410.	Special Mobile Home Towing Restriction
R17-6-411.	Maximum Permitted Weights
Table 3.01.	Maximum Permitted Weight Computations: Axle Width - 8 feet
Table 3.02.	Maximum Permitted Weight Computations: Axle Width - 8 feet 3 inches
Table 3.03.	Maximum Permitted Weight Computations: Axle Width - 8 feet 6 inches
Table 3.04.	Maximum Permitted Weight Computations: Axle Width - 8 feet 9 inches
Table 3.05.	Maximum Permitted Weight Computations: Axle Width - 9 feet
Table 3.06.	Maximum Permitted Weight Computations: Axle Width - 9 feet 3 inches
Table 3.07.	Maximum Permitted Weight Computations: Axle Width - 9 feet 6 inches
Table 3.08.	Maximum Permitted Weight Computations: Axle Width - 9 feet 9 inches
Table 3.09.	Maximum Permitted Weight Computations: Axle Width - 10 feet
Ill. 3.	Overweight Axle Groups
R17-6-412.	Highway-specific Restrictions, Requirements, Conditions, and Allowances

Table 4.	Permanent Highway Restrictions, Requirements, Conditions, and Allowances
R17-6-413.	Page-Lake Powell Area Houseboat Transport Provisions
Table 5.	Page-Lake Powell Area Highways
R17-6-414.	Lake-specific Weekend and Holiday Transport Exception
R17-6-415.	Emergency Expired

ARTICLE 5. ENVELOPE PERMIT SPECIAL PROVISIONS

Article 5, consisting of Sections R17-6-501 through R17-6-505, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

Section

R17-6-501.	Envelope Permit Required Recordkeeping
R17-6-502.	Envelope Permit Suspension Point System
R17-6-503.	Envelope Permit Suspension; Revocation; Enforcement
R17-6-504.	Notice of Point Assessment, Denial, Suspension, or Revocation
R17-6-505.	Envelope Permit Reapplication
R17-6-506.	Page-Lake Powell Area Houseboat Hauling Envelope Permit

ARTICLE 1. GENERAL PROVISIONS

Article 1, consisting of Sections R17-6-101 through R17-6-112, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

R17-6-101. General Provision; Definitions; Time of Day

- A. General Provision.** The Department shall issue and regulate oversize and overweight special permits as provided under this Chapter. The Department implements these Sections under authority of A.R.S. §§ 28-366, 28-1103, 28-1104, and 28-7045, in collaboration with the Overdimensional Permit Council as prescribed under A.R.S. § 28-1150.
- B. Definitions.** In addition to the definitions prescribed under A.R.S. §§ 28-101 and 28-601, the following terms apply to this Chapter:

“AASHTO” means the American Association of State Highway Transportation Officials.

“ADOT” means the Arizona Department of Transportation.

“Applicant” means a person or entity seeking to obtain a special permit or envelope permit from the Department under A.R.S. Title 28, Chapter 3, Article 18 or 19, and this Chapter.

“Appurtenance” means any not readily removable manufacturer-installed or dealer-installed fixture attached to a vehicle or load that increases a peripheral dimension of the vehicle or load.

“Arizona Central Commercial Permits” means the statewide ADOT ECD office for oversize and overweight special permit applications and information:

1225 N. 25th Avenue
Phoenix, Arizona 85009
Voice line: (602) 712-8851
Facsimile: (602) 272-1887
Internet: www.azdot.gov/mvd/commercialenforcement/permrequest-forms.asp

“Cargo carrying unit” has the same meaning as prescribed under A.R.S. § 28-1103.

“Certified law enforcement officer” means a person who is an active duty Arizona peace officer standards and training board certified peace officer.

“Class C Maintenance Permit Services” means the statewide ADOT office for class C oversize and overweight special permit applications and information:

206 S. 17th Avenue, Mail Drop 004R
Phoenix, AZ 85007
Voice: (602) 712-8176 or (602) 712-8280
Fax: (602) 712-3380
Internet: www.azdot.gov

“Combination vehicle” has the same meaning as prescribed under A.R.S. § 28-101, “combination of vehicles,” but excludes a mobile home.

“Continuous travel” means to operate a vehicle continuously throughout any 24-hour period, except as provided under R17-6-404.

“ECD” means ADOT’s Enforcement and Compliance Division.

“Envelope” has the same meaning as prescribed under A.R.S. § 28-1141 encompassing the outermost dimensions of a load or vehicle as prescribed under A.R.S. § 28-1144, without exceeding the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411.

“Envelope permit” has the same meaning as prescribed under A.R.S. § 28-1141, which:

- Restricts the loads to non-reducible only,
- Allows unlimited trips within the permit’s validity period,
- Allows the permitted carrier unlimited load changes,
- Requires a transported load to meet envelope dimensional criteria,
- Restricts operation to certain routes, and
- Excludes the transporting of a mobile home.

“Established place of business” means a permanent site or location where an oversize or overweight special permit holder conducts business.

“Highway” has the same meaning as prescribed under A.R.S. § 28-101, “street” or “highway.”

“Highway feature” means a roadway, structure, traffic control device, right-of-way, or any item connected with highway travel.

“IFTA license” means an interstate user license issued by an applicant’s base jurisdiction for fuel tax purposes under the International Fuel Tax Agreement as provided under A.R.S. Title 28, Chapter 16, Article 2.

“Law enforcement escort” means a uniformed certified law enforcement officer in a fully marked patrol vehicle that accompanies an oversize or overweight special permitted vehicle.

“LCV” means longer combination vehicle, which has the same meaning as prescribed under 23 CFR 658.5.

“Legal weight” means within the maximum gross weight limitations prescribed under A.R.S. § 28-1100 and R17-6-102, Table 1.

“Mobile home” has the same meaning as prescribed under A.R.S. § 28-2001, which encompasses both a mobile home and a manufactured home as more specifically prescribed under A.R.S. § 41-2142.

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“Mountain Standard Time” means the standard time in Arizona as prescribed under 49 CFR 71 and A.R.S. § 1-242.

“Non-reducible load or vehicle” has the same meaning as prescribed under 23 CFR 658.5, “nondivisible load or vehicle.”

“Oversize” means a size of vehicle, combination of vehicles, or vehicle and load combination that exceeds a maximum size limitation provided under A.R.S. Title 28, Chapter 3, Article 18 or 19.

“Overweight” means a weight of vehicle, combination of vehicles, or vehicle and load combination that exceeds a maximum weight limitation provided under A.R.S. Title 28, Chapter 3, Article 18 or 19.

“Permittee” means a person or entity to whom the Department issues an oversize or overweight special permit or envelope permit under this Chapter, and who is responsible for meeting the obligations, responsibilities, and specifications indicated on the permit.

“Person” has the same meaning as prescribed under A.R.S. § 28-5201.

“Pounds per inch of tire width” means a measure of load restriction based on rated tire size, which is determined by dividing the weight carried by an axle group, in pounds, by the number of tires in the group and dividing that result by the manufacturer’s rated tire width indicated on the sidewall of the tire, or in the absence of sidewall marking, the load rating specified in any publication of an organization listed under 49 CFR 571.119, Federal Motor Carrier Safety Standard No. 119.

“Power unit” has the same meaning as prescribed under A.R.S. § 28-1141.

“Public weighmaster” has the same meaning as prescribed under A.R.S. § 41-2051.

“Special permit” means a document issued by the Department under A.R.S. § 28-1103, which authorizes the permittee to operate or transport an oversize, overweight, or oversize and overweight vehicle, combination of vehicles, or vehicle and load combination on a state highway, subject to the terms and conditions of the permit.

“Special permitted vehicle” means the vehicle, combination of vehicles, or vehicle and load combination described to the Department, as required under A.R.S. § 28-1104, on application for a special permit.

“Specified load” means the dimensions and weights a special permit applicant declares to the Department, as provided under A.R.S. § 28-1104, regarding any item or series of items to be transported throughout an entire permit period.

“Sunrise” and “sunset” have the same meaning and daily calculation as prescribed by the United States Naval Observatory (USNO), which:

The Department uses to determine normal permit transport start and stop times as provided under R17-6-401; and

An interested person may access on the Internet from the USNO at <http://aa.usno.navy.mil>, or in hard copy format from the Arizona Central Commercial Permits office.

“Tandem axle” has the same meaning as prescribed under A.R.S. § 28-1100(B).

“TI” means traffic interchange, which is a junction of roadways arranged to allow for the free flow of traffic uninter-

rupted by crossing traffic routed over or under the main roadway.

“Tridem axle” means any three consecutive axles whose extreme centers are not more than 144 inches apart and are individually attached to, or articulated from, a common attachment to the vehicle, including a connecting mechanism designed to equalize the load between axles.

“USDOT number” means the motor carrier identification number, assigned to a company by the U.S. Department of Transportation’s Federal Motor Carrier Safety Administration, preceded by the letters USDOT.

“UX” means a temporary highway or route segment designated by the Department as:

A segment of highway no longer part of the mainline U.S. system of highways, but still owned and maintained by the Department; or

A portion of a U.S. Route affected by mining operations and subject to realignment by the mining company as the mine expands operations.

“Watercraft” has the same meaning as prescribed under A.R.S. § 5-301 that is properly registered with the Arizona Game and Fish Department or the U.S. Coast Guard.

- C. Time of Day. In this Chapter, a time of day prescribed is Mountain Standard Time as defined under subsection (B) except where a state highway traverses a tribal nation that adopts Daylight Saving Time under 49 CFR 71.2.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 13 A.A.R. 866, effective March 6, 2007 (Supp. 07-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-102. Threshold Dimensions; Special Permit Exemptions

- A. Unless exempt under this Section or A.R.S. § 28-1091(C), § 28-1093(D), or § 28-1095(A)(6), a person shall obtain and carry an oversize or overweight special permit issued by the Department under this Chapter if transporting a vehicle or load exceeding any dimension provided under Table 1 on a state highway under the jurisdiction of the Department.
- B. A permittee and a driver of an oversize or overweight special permitted vehicle shall comply with all applicable:
1. Safety requirements provided under Article 3, and
 2. Transport provisions provided under Article 4.
- C. An oversize or overweight special permit is not required if crossing a state highway at a level grade and no highway structures are involved.
- D. An oversize or overweight special permit is not required for snow removal equipment operated by one of the following:
1. An Arizona state agency,
 2. An Arizona county,
 3. An Arizona city, or
 4. An Arizona municipality other than a city.
- E. The special permit exemption provided under subsection (D) applies only to snow removal equipment traveling on its own wheels and:
1. Operating for the purpose of clearing snow or ice,
 2. Traveling to a facility for repair, or
 3. Traveling to a location used for the purpose of loading or unloading de-icing materials.
- F. The operator of an oversize or overweight vehicle exempt from the special permit requirement under this Section shall

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comply with all applicable safety requirements provided under Article 3 unless otherwise prescribed by statute.

effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665,

Table 1. Threshold Dimensions

The Department shall issue an applicable class of special permit, as provided under Article 2, for each vehicle, or vehicle and load combination, exceeding any of the following maximum limits:

Width (A.R.S. § 28-1093)		
Vehicles operating on the state highway system designated by the Transportation Board under A.R.S. § 28-304(B)(2)	8' 6" (8' if the maximum width of the route is further restricted under R17-6-412, Table 4)	
Height (A.R.S. § 28-1094)		
Vehicles operating on the state highway system designated by the Transportation Board under A.R.S. § 28-304(B)(2)	14' (13' 6" if the maximum height of the route is further restricted under R17-6-412, Table 4)	
Length (A.R.S. §§ 28-1095 and 28-1097)		
Straight trucks		40'
Truck tractor - semitrailer combination; or Truck tractor - semitrailer - forklift combination	Interstate system	57' 6" semitrailer
Truck tractor - semitrailer combination; or Truck tractor - semitrailer - forklift combination	Other highways	53' semitrailer; or 65' overall combination if more than 53'
Truck tractor - semitrailer - full trailer combination		28' 6" per trailer
Vehicle transporter combination		75'
Overhang	Front of vehicle Rear of vehicle or trailer	3' 6'
Weight (A.R.S. § 28-1100)		
Allowable weight shall be determined using the listed limits or the manufacturer's weight rating, whichever is less.		
Single axle		20,000 lbs.
Tandem axle		34,000 lbs.
Steering axle		20,000 lbs.
Gross weight; five axles or more Maximum allowable axle group weights are computed using the formula prescribed under A.R.S. § 28-1100(A)(4)		80,000 lbs.

Historical Note

New Table 1 made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-103. General Application Procedure for Special Permits

- A. Except as provided under subsections (E) and (F), an applicant shall apply to the Department using one of the following methods.
 - 1. For an oversize or overweight special permit:
 - a. Complete an oversize/overweight special permit application form, available on the Department's web site at www.azdot.gov, and fax, mail, or deliver the written application to the Arizona Central Commercial Permits office at the location provided under R17-6-101, or an Arizona port of entry identified by the Department on its Enforcement Compliance Division - Commercial Vehicle Enforcement Services web page;
 - b. Complete and submit the oversize/overweight special permit application form online at www.azdot.gov or apply through the Department's electronic service provider if the appropriate permit is available for online purchase.
 - 2. For an envelope permit:
 - a. Complete an envelope permit application form, available on the Department's web site at www.azdot.gov, and fax, mail, or deliver the written

- b. Submit the written application form to an Arizona port of entry identified by the Department on its Enforcement Compliance Division - Commercial Vehicle Enforcement Services web page.
- B. Unless otherwise provided under this Chapter, an applicant for an oversize or overweight special permit or envelope permit shall provide to the Department, at the time of application, all applicable fees and information required by the Department for issuance of the appropriate class of permit, including:
 - 1. Company related information:
 - a. Name and address of the applicant's principal or established place of business;
 - b. Name, phone number, and email address of an official company representative; and
 - c. USDOT number;
 - 2. Power unit related information:
 - a. Vehicle make, body style, and year;
 - b. Vehicle identification number;
 - c. Unit number assigned;
 - d. License plate number; and
 - e. Base jurisdiction - state of registration;

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3. Vehicle and load combination related information:
 - a. Trailer plate number(s);
 - b. Total number of axles;
 - c. Overall gross weight;
 - d. Overall length, width, and height; and
 - e. Length of front and rear overhang if applicable;
 4. Load related information:
 - a. Specific load description;
 - b. State and federal routes requested;
 - c. Starting and ending location within the state;
 - d. If the load is overweight:
 - i. Axle spacing measurements,
 - ii. Axle width measurements,
 - iii. Number of tires per axle,
 - iv. Weight measurements per axle, and
 - v. Width of each tire;
 - e. If the load is a mobile home:
 - i. Complete serial number; and
 - ii. Evidence of payment of all applicable ad valorem taxes, as required under A.R.S. § 28-1104, in the form of a 504 tax clearance permit issued by the county in which the mobile home is currently located;
 5. Proof of valid registration that complies with the requirements of A.R.S. § 28-2153; and
 6. Proof of a valid IFTA license that complies with the requirements of A.R.S. § 28-5742 if applicable.
- C.** An applicant for an oversize or overweight special permit shall certify to the Department that all information provided on the application is true and correct.
- D.** An applicant requesting a special permit for transport of a self-propelled mobile crane, drilling rig, or similar specialty equipment shall additionally follow the application procedure provided under R17-6-205.
- E.** An applicant requesting a special permit for transport of a specific non-reducible vehicle and load combination with a dimension that exceeds a class A oversize and overweight special permit limitation provided under R17-6-201, or that exceeds the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411, shall follow the application procedures provided under R17-6-104 and R17-6-204.
- F.** An applicant requesting a special permit for transport of an LCV shall follow the application procedure provided under R17-6-206.
- Historical Note**
- New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).
- R17-6-104. Additional Special Permit Requirements and Restrictions; Engineering Analysis**
- A.** To promote safe transport of oversize and overweight vehicles, or vehicle and load combinations, the Department's Class C Maintenance Permit Services section shall evaluate each class C special permit application to determine, on a case-by-case basis, whether additional permit requirements or restrictions are appropriate and necessary as a condition of permit approval. The Department's decision to require additional permit restrictions shall be based on its consideration of:
1. Bridge capacities;
 2. Load size and weight;
 3. Pavement stress;
 4. Road width, grade, and condition; and
 5. Traffic dynamics of the proposed route.
- B.** The Department shall require a special permit applicant to obtain an engineering analysis for transport of an overweight vehicle or vehicle and load combination:
1. Exceeding 250,000 pounds;
 2. Exceeding the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411; or
 3. Exceeding a bridge weight restriction provided under R17-6-412, Table 4.
- C.** If the Department requires an engineering analysis of a proposed route as a condition of permit approval, and is unable to dedicate the employee resources necessary to timely complete the required analysis, a special permit applicant may obtain an analysis prepared by a non-Department engineer at the applicant's own expense.
1. An engineer registered by the Arizona State Board of Technical Registration in structural or civil engineering, as prescribed under A.R.S. Title 32, Chapter 1, shall prepare an engineering analysis of the proposed route according to industry standards.
 2. The special permit applicant shall submit to the Department for review any engineering analysis prepared by a non-Department engineer.
 3. An engineering analysis prepared according to the following publications, available on the Department's web site at www.azdot.gov, complies with industry standards:
 - a. The most recently published edition of the AASHTO Manual for Bridge Evaluation, including all interims, standards, or guidelines;
 - b. The most recently published edition of the AASHTO Load and Resistance Factor Design (LRFD) - Bridge Design Specifications, including all interims, standards, or guidelines; and
 - c. The ADOT Bridge Load Rating Guidelines and Bridge Design Guidelines.
 4. The non-Department engineer shall certify that an applicant's overweight vehicle will not overstress or damage any element of:
 - a. A highway structure, or
 - b. Any other state property.
- D.** An applicant for a class C special permit shall submit to the Department, at the time of special permit application, all applicable fees required under R17-6-204 for preparation or review of an engineering analysis.
- E.** An applicant for a class C special permit may resubmit an engineering analysis approved by the Department within the previous 12 months if:
1. The size and weight of the applicant's vehicle and load are identical to the previously approved permit application;
 2. The segments of the applicant's proposed route are within the outer limits of the previously approved route; and
 3. The condition of the highway structure or other state property has not changed.
- F.** The Department shall conduct a separate review and approval process for each engineering analysis submitted under this Section.
- G.** If the applicant's engineering analysis shows that a highway structure will not support the overweight vehicle as requested, the Department shall deny the application for a class C special permit.
- H.** If the Department determines a potential traffic safety risk exists, a class C special permit applicant shall submit to the Department a comprehensive traffic control plan as provided under R17-6-108.

- I. The Department of Transportation, the Department of Public Safety, or any other law enforcement entity lawfully authorized to provide certified weights may weigh a class C special permitted vehicle and load exceeding 250,000 pounds, or require the applicant to have the vehicle and load weighed as prescribed under A.R.S. § 28-1102.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-105. Special Permit Limitation

The Department shall issue oversize and overweight special permits for state highways. A permittee shall apply separately with an applicable political subdivision or tribal nation for permission to operate on a county, municipal, or tribal route.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-106. Special Permit Extension

- A. Upon request by a permittee, the Department shall authorize a one-time extension of up to four days for a single-trip special permit if:
1. The permittee needs to exchange a permitted vehicle for another due to mechanical failure, or
 2. Transport by the permitted vehicle is delayed by inclement weather.
- B. Except as provided under subsection (C), the special permit extension authorization under subsection (A) is administered:
1. By signature of an authorized ECD agent, or
 2. By telephone in an emergency situation after first contacting Arizona Central Commercial Permits or the Arizona port of entry closest to the affected area as listed on the Department's web site at www.azdot.gov.
- C. A special permit extension authorization for a class C special permit is administered only by Class C Maintenance Permit Services.
- D. A class C special permit extension request due to mechanical failure shall include:
1. A written statement from the repair facility, on company letterhead, referencing the necessary repairs; and
 2. Any new power unit and registration numbers, if applicable.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-107. Special Permit Confiscation

- A. Except as provided under subsection (B), a peace officer designated by the Director under A.R.S. § 28-369 may confiscate an oversize or overweight special permit before its expiration date if the permittee or driver is cited for a violation of this Chapter or A.R.S. Title 28, Chapter 3, Article 18.
- B. The Director may suspend, revoke, and retrieve an envelope permit as provided under A.R.S. § 28-1147 and R17-6-503.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-108. Traffic Control Plan

- A. To promote safe transport of oversize and overweight vehicles, or vehicle and load combinations, the Department shall evaluate each class C special permit application to determine, on a case-by-case basis, whether a potential traffic safety risk exists that may require a comprehensive traffic control plan as a condition of permit approval. The Department's decision to require a comprehensive traffic control plan shall be based on its consideration of:
1. Bridge capacities;
 2. Load size and weight;
 3. Pavement stress;
 4. Road width, grade, and condition; and
 5. Traffic dynamics of the proposed route.
- B. If the Department determines a potential traffic safety risk exists, a class C special permit applicant shall submit to Class C Maintenance Permit Services at the time of special permit application, a comprehensive traffic control plan prepared as follows:
1. Identify all roadway features located along the proposed route that may inhibit movement of the vehicle or vehicle and load combination;
 2. Identify all obstructions that may be subject to potential disturbance or damage;
 3. Specify how all structures, delineators, foliage, and official traffic control devices will be managed or avoided;
 4. Specify all available pullout points located along the proposed route listed by highway and milepost number;
 5. Specify how all side traffic will be managed;
 6. Specify the rate of speed at which the load will travel along the proposed route;
 7. Specify the approximate times when the load will be in transit; and
 8. Provide a contingency plan to be followed in the event of a breakdown.
- C. As a condition of class C special permit issuance, the Department may require an applicant to coordinate use of one or more law enforcement escorts as needed to ensure public safety while transporting a proposed load.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-109. Special Permit Denial

- The Department shall deny an oversize or overweight special permit application, or revoke and confiscate a previously approved special permit, if:
1. The proposed transport route or a structure on the route is:
 - a. Unable to bear the size or weight of the transport vehicle and load according to the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411,
 - b. Under repair, or
 - c. Temporarily closed due to a hazardous condition listed under R17-6-403(B);
 2. An applicant for a permit to transport a mobile home does not provide written proof of ad valorem tax payment or clearance as required under A.R.S. § 28-1104; or
 3. The Department determines that the special permit applicant made a material misrepresentation or misstatement on the permit application or any other document submitted to the Department in support of the permit application.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-110. Liability

A person who operates an oversize or overweight special permitted vehicle and a person who causes the vehicle to be operated shall be liable for any damage caused to a state highway by the oversize or overweight vehicle or load during transport as provided under A.R.S. § 28-1107.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-111. Administrative Hearing

If the Department denies an oversize or overweight special permit application, or revokes and confiscates a previously issued special permit, the permittee may appeal the action using the procedure provided under 17 A.A.C. 1, Article 5.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-112. Emergency Operation Provision

- A. In time of statewide or local emergency that affects public welfare or safety, according to general powers under A.R.S. §§ 28-363(A)(5) and 28-364(B), the Director may authorize transport of an oversize or overweight vehicle or load without a special permit for purposes of relief or repair.
- B. Authorization for emergency operation under this Section may be obtained by contacting the Arizona port of entry closest to the affected area as listed on the Department’s web site at www.azdot.gov.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-113. Electronic Access to Local Permit Ordinances and Rules

- A. A local authority that issues oversize and overweight special permits under A.R.S. § 28-1103 and this Chapter shall make available, to the Department’s Arizona Central Commercial Permits office, an Internet web link to where the local authority’s current ordinances and rules relating to the excess size and weight special permits can be electronically accessed.
- B. The Department shall immediately post, to its web site at www.azdot.gov, each Internet web link provided by a local authority under subsection (A) and A.R.S. § 28-1103.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 866, effective March 6, 2007 (Supp. 07-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

ARTICLE 2. SPECIAL PERMIT CLASSES AND FEES

Article 2, consisting of Sections R17-6-201 through R17-6-210, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

R17-6-201. Class A Oversize and Overweight Special Permits - Specified Non-reducible Vehicle, Load, or Combination

- A. The Department shall issue a multiple or single trip class A oversize, overweight, or oversize and overweight special permit according to the following criteria for a specified non-reducible vehicle, combination of vehicles, or vehicle and load combination that exceeds a dimension provided under R17-6-102, Table 1, but does not exceed the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411, or any of the following maximum limits:

Vehicle or load description	A non-reducible specified load over a threshold dimension provided under R17-6-102, Table 1, to a maximum:	
	Height	16 feet
	Overall length	120 feet
	Width	14 feet
	Weight	250,000 lbs.
Permit option	Single trip: 96-hour maximum	
	Multiple trip: 30-day maximum	
Standard permit fee for weight not exceeding 80,000 pounds (A.R.S. § 28-1105)	Single trip	\$15
	Multiple trip	\$30
Overweight permit fee for weight less than 250,000 pounds but that exceeds legal threshold under R17-6-102, Table 1 (A.R.S. § 28-1105)	Single trip	\$75
	Multiple trip	\$75

- B. An applicant for a class A oversize, overweight, or oversize and overweight special permit shall apply to the Department and submit appropriate fees using the application procedure provided under R17-6-103.
- C. A permittee or driver of an oversize, overweight, or oversize and overweight vehicle, combination of vehicles, or vehicle and load combination shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated restrictions and requirements.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-202. Class B Oversize Special Permit - Specified Non-reducible Vehicle and Load Combination

- A. The Department shall issue an annual class B oversize special permit according to the following criteria for multiple trips of a specified non-reducible vehicle and load combination that exceeds a dimension provided under R17-6-102, Table 1, but does not exceed the maximum permitted weight computations

for overweight axle group weight distribution as provided under R17-6-411 or any of the following maximum limits:

Vehicle or load description	A non-reducible, specified vehicle and load combination (excluding cranes and drill rigs) over a threshold dimension provided under R17-6-102, Table 1, to a maximum:	
	Height	14 feet 8 inches
	Overall length	80 feet
	Width	12 feet 6 inches
	Weight	80,000 lbs.
Permit option	Multiple trip: one year	
Fee (A.R.S. § 28-1105)	\$360	

- B. An applicant for a class B oversize special permit shall apply to the Department and submit appropriate fees using the application procedure provided under R17-6-103.
- C. A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated restrictions and requirements.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-203. Class B - Type R Oversize Recreational Vehicle Special Permit - Commercial Transport

- A. The Department shall issue an annual class B - Type R oversize special permit according to the following criteria for a commercial transporter of a recreational vehicle that exceeds the width threshold prescribed under A.R.S. § 28-1093 and R17-6-102, Table 1, but does not exceed the following maximum limit:

Vehicle or load description	A dealer, manufacturer, or transporter hauling or driving a recreational vehicle with appurtenances wider than 8 feet, 6 inches, on behalf of a dealer, manufacturer, or consumer
Permit option	For each original permit purchased, up to 24 additional copies of that permit may be issued, all of which are valid for unlimited use by an unlimited number of vehicles throughout a one-year period by the permittee.
Fee (A.R.S. § 28-1105)	\$360 per year

- B. An applicant for a class B - Type R oversize special permit shall apply to the Department and submit appropriate fees using the application procedure provided under R17-6-103.
- C. A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated restrictions and requirements.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final

rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-204. Class C Oversize and Overweight Special Permits - Specified Non-reducible Vehicle, Load, or Combination Over Class A Limits

- A. The Department shall issue a single trip class C oversize, overweight, or oversize and overweight special permit according to the following criteria for a specified non-reducible vehicle, combination of vehicles, or vehicle and load combination that exceeds a dimension provided under R17-6-201 or as required under R17-6-307(B) and (C):

Vehicle or load description	A non-reducible load that exceeds dimensions and weights of all other permit classes or when class C operation is proposed on a route further restricted under R17-6-412, Table 4	
Permit option - requires pre-approval by Class C Maintenance Permit Services	Single trip only	Load shall be specifically described by the applicant as provided under subsection (C) and A.R.S. § 28-1104
Standard permit fees (A.R.S. § 28-1105)	Oversize only Overweight only Oversize and overweight	\$15* \$75* \$75*
*In addition to the standard permit fees above, the Department shall collect the following class C review and analysis fee(s) as applicable to the applicant's proposed vehicle and load configuration:		
Class C review and analysis fee (A.R.S. § 28-1103)	Height or width 18 feet or less	\$15
	Height or width over 18 feet	\$25
Engineering analysis (A.R.S. § 28-1103)	Prepared by non-ADOT engineer, and reviewed by ADOT engineer	\$75 per 50 mile increment of proposed route
	Prepared by ADOT engineer	\$125 per 50 mile increment of proposed route

- B. An applicant for a class C oversize or overweight special permit shall:
 1. Complete a class C special permit application form provided by the Department and available online at www.azdot.gov;
 2. Submit the completed class C special permit application, including all information required under subsection (C) and all appropriate fees, to Class C Maintenance Permit Services as provided under R17-6-103, R17-6-104, and R17-6-108, as applicable;
 3. Contact all applicable utility and cable companies to verify adequate overhead cable and utility line clearances along the proposed route as required under R17-6-308;
 4. Obtain an encroachment permit in advance of the proposed transport as provided under 17 A.A.C. 3, Article 5, if constructing a fixed or temporary improvement within a state highway right-of-way, or for any activity requiring the temporary use of, or intrusion upon, a state highway right-of-way, including a median; and
 5. Provide or arrange for the use of additional traffic control devices appropriate for the proposed transport if the Department requires additional traffic control measures

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as a condition of permit approval. All additional traffic control devices shall conform to the manual and specifications adopted by the Department under A.R.S. § 28-641.

- C. A complete class C special permit application for transport of an oversize or overweight load shall:
 1. Indicate the starting and ending points of the proposed route;
 2. Document the specific overall dimensions of the vehicle with its specified load, to include:
 - a. Height,
 - b. Length, and
 - c. Width;
 3. Diagram the vehicle and specified load illustrating all of the following information:
 - a. Axle spacing;
 - b. Axle weight;
 - c. Axle width;
 - d. Tires per axle;
 - e. Tire width as designated by the manufacturer;
 - f. Maximum width to the outside of the axles, excluding any load-induced tire bulge; and
 - g. Load weight.
 4. Include a comprehensive traffic control plan as provided under R17-6-108 if the Department requires traffic control measures as a condition of permit approval;
 5. Indicate the estimated time needed to change out a power unit or other special equipment if the Department, through detailed analysis and as a condition of permit approval, requires the use of an additional power unit or other special equipment to ensure safe transport of the proposed load. The Department’s decision to require an additional power unit or other special equipment shall be based on its consideration of the:
 - a. Estimated timing involved with clearing a route after a breakdown;
 - b. Expected weather conditions;
 - c. Proximity and availability of reserve resources;
 - d. Size and weight of the load;
 - e. Traffic dynamics of the proposed route; and
 - f. Width, grade, and condition of the roads;
 6. Include proof of gross weight in the form of a public weighmaster’s certificate of weight and measure issued at a certified public scale if required by the Department after twice denying an application for incorrect weights;
 7. Include proof of valid registration that complies with the requirements of A.R.S. § 28-2153;
 8. Include proof of a valid IFTA license that complies with the requirements of A.R.S. § 28-5742, if applicable; and
 9. Include any other applicable requirement provided under R17-6-104.
- D. An applicant for a class C oversize or overweight special permit to transport a mobile home shall additionally submit to the Department all appropriate:
 1. Serial numbers assigned to the mobile home; and
 2. Evidence of payment of all applicable ad valorem taxes, as required under A.R.S. § 28-1104, in the form of a 504 tax clearance permit issued by the county in which the mobile home is currently located.
- E. A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated conditions and allowances.
- F. The Department shall require a class C special permit for an overweight vehicle or vehicle and load combination heavier than 250,000 pounds or that exceeds the maximum permitted

weight computations for overweight axle group weight distribution as provided under R17-6-411.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-205. Class D Oversize and Overweight Special Permit - Self-propelled Mobile Crane, Drilling Rig, or Similar Specialty Equipment

- A. The Department shall issue an annual class D oversize or overweight special permit according to the following criteria for a specified non-reducible self-propelled mobile crane, drilling rig, or similar specialty equipment meeting the dimensional requirements provided under R17-6-201, without exceeding the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411:

Vehicle or load description	A self-propelled mobile crane, drilling rig, or similar specialty equipment meeting the dimensional requirements provided under R17-6-201.
Permit option	Multiple trip: one year
Fee (A.R.S. § 28-1105)	\$600 per year

- B. An applicant for a class D oversize or overweight special permit shall submit to the Department, with all appropriate fees, an application form provided by the Department that includes all of the following information:
 1. Specific dimensions of the vehicle and load combination, including:
 - a. A detailed description;
 - b. A detailed drawing that illustrates all of the following:
 - i. Axle spacing;
 - ii. Axle weight;
 - iii. Axle width;
 - iv. Tires per axle;
 - v. Tire width as designated by the manufacturer;
 - vi. Maximum width to the outside of the axles, excluding any load-induced tire bulge; and
 - vii. Load weight;
 - c. A detailed listing of all equipment to be included, such as counterweights, outriggers, boom position, position of boom dolly, etc.; and
 - d. A table of loads supplied by the manufacturer listing component and total weights;
 2. Proof of gross weight:
 - a. For an initial application, a public weighmaster’s certificate of weight and measure issued at a certified public scale once the vehicle is equipped and set for highway travel; or
 - b. For a renewal application, a certification by the applicant that no dimension has changed and the vehicle does not exceed the originally certified dimensions or weights;
 3. Proof of valid registration that complies with the requirements of A.R.S. § 28-2153;
 4. Proof of a valid IFTA license that complies with the requirements of A.R.S. § 28-5742 if applicable; and
 5. Documentation of any applicable encroachment permit obtained under 17 A.A.C. 3, Article 5, if the applicant must temporarily move any state-owned highway feature as part of a planned transport.

- C.** Conformance to all permit restrictions and vehicle certification is the sole responsibility of the applicant. Violation of the annual permit in size, weight, length, height, changing the boom position, dolly, or trailer position, or any other restriction stated on the permit shall render the permit invalid and no permit fee or portion thereof will be refunded. Annual permits are non-transferable and non-refundable.
- D.** A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated restrictions and requirements.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-206. Class E Oversize and Overweight Special Permits - Reducible Multiple Trailer LCVs

- A.** The Department shall issue a class E oversize or overweight special permit according to the types and restrictions listed under Table 2 for transporting reducible loads using an LCV consisting of a truck or truck tractor and one or more trailers.
1. A person who operates, and a person who causes to be operated, an oversize or overweight special permitted vehicle shall be jointly responsible for meeting all permit requirements; and
 2. A person shall not operate any other trailer configuration or multiple trailer combination under the class E special permit, unless authorized by the Department and specifically indicated on the permit.
- B.** The Department shall issue a class E oversize or overweight special permit for an LCV only at the following state ports of entry:

1. Page,
 2. St. George, or
 3. Teec Nos Pos.
- C.** An applicant for a class E oversize or overweight special permit shall submit to the Department, with all appropriate fees, an application form provided by the Department that includes all of the following information:
1. Specific dimensions of the vehicle and load combination;
 2. Proof of valid registration that complies with the requirements of A.R.S. § 28-2153;
 3. Proof of a valid IFTA license that complies with the requirements of A.R.S. § 28-5742 if applicable; and
 4. Other information as needed by the Department to issue an appropriate permit, which includes:
 - a. Company name;
 - b. Company or terminal address;
 - c. Company USDOT #;
 - d. Company mailing address;
 - e. Company contact name, address, telephone number, and fax number or email address;
 - f. Company representative's name and title; and
 - g. Specific routes requested.
- D.** The operator of a class E special permitted LCV shall comply with A.R.S. § 28-1100(A)(4) and not exceed the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411 or any other applicable state highway restriction, condition, or allowance provided by the Department under R17-6-412, Table 4.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 2. Class E LCV Special Permit and Issuance Criteria

<p>LCV Combination - Double Truck tractor and two trailing units (23 CFR 658, App. C); Truck and one full trailer (A.R.S. § 28-1103); or Truck tractor, semitrailer, and one full trailer (A.R.S. § 28-1103).</p> <p>LCV Combination – Triple* Truck tractor and three trailing units (23 CFR 658, App. C); Truck, semitrailer, and one full trailer (A.R.S. § 28-1103); or Truck and two trailers (A.R.S. § 28-1103).</p>	
Route	Locations Authorized for LCV Travel (A.R.S. § 28-1103 and 23 CFR 658, App. C)
I-15	MP 0.00 (Nevada State Line) to MP 29.40 (Utah State Line)
State 98	MP 294.67 (Junction US 89) to MP 314.67
State 389	MP 0.00 (Utah State Line) to MP 32.60 (Junction US 89A)
US 89	MP 536.99 to MP 556.99 (Utah State Line)
US 89A	MP 579.30 (Junction SR 67) to MP 613.03 (Utah State Line)
US 160	MP 393.57 (Junction US 163 at Kayenta) to MP 470.00 (New Mexico State Line)
US 163	MP 393.52 (Junction US 160 at Kayenta) to MP 416.71 (Utah State Line)
Gross Vehicle Weight of LCV Combination	
Permit Duration and Fee (A.R.S. § 28-1105)	
80,001 lbs through 111,000 lbs	Single or 30-Day - \$75
80,001 lbs through 111,000 lbs	Annual - \$360
121,000 lbs for 9 axles; or 123,500 lbs for 10 axles	Annual - \$360
111,001 lbs through 129,000 lbs*	Single or 30-Day - \$75
111,001 lbs through 129,000 lbs*	Annual - \$600
*Triple LCVs shall not exceed 123,500 lbs except on I-15.	
Maximum Length	
The overall length of the cargo carrying unit of the vehicle combination shall not exceed 95 feet.	
Limits and Restrictions	
LCV operation is subject to federal bridge formula B limits and restricted to the right most traffic lane. Operation may be limited by the Department and restricted or prohibited during periods when traffic, weather, or other safety considerations make such operation unsafe or inadvisable.	

Historical Note

New Table 2 made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table 2 amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-207. Repealed

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Repealed by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-208. Class G Overwidth Special Permits - Specified Vehicle or Combination with Reducible Load Over Legal Width

A. The Department shall issue an annual, 30-day, or single trip class G overwidth special permit according to the following criteria for a specified vehicle, or vehicle combination, with a reducible load that exceeds only the width threshold provided under R17-6-102, Table 1, but does not exceed the following maximum limit:

Vehicle or load description	A specified reducible load that exceeds only the legal width threshold provided under R17-6-102, Table 1, but does not exceed 10 feet in width
-----------------------------	--

Permit option	Single trip: 96-hour maximum	
	Multiple trip: 30-day maximum	
	Multiple trip: one year	
Fee (A.R.S. § 28-1105)	Single trip	\$15
	Multiple trip, 30 day	\$30
	Multiple trip, one year	\$360

- B. An applicant for a class G overwidth special permit shall apply to the Department and submit appropriate fees using the application procedure provided under R17-6-103.
- C. A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated restrictions and requirements.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-209. Class H Overwidth Special Permit - Specified Vehicle and Watercraft Load Combination

A. The Department shall issue an annual class H overwidth special permit according to the following criteria for multiple trips of a specified vehicle and watercraft load combination that exceeds the width threshold established under A.R.S. § 28-1093 and R17-6-102, Table 1:

Vehicle or load description	Applicable only to a specified watercraft load registered with Arizona Game & Fish or U.S. Coast Guard that is no wider than 10 feet and within all other threshold dimensions provided under R17-6-102, Table 1
Permit option	Multiple trip: one year
Fee (A.R.S. § 28-1103)	\$45

- B. An applicant for an annual class H overwidth watercraft special permit shall apply to the Department and submit appropriate fees using the application procedure provided under R17-6-103.
- C. In addition to the application procedure provided under R17-6-103, an applicant for an annual class H overwidth watercraft special permit shall submit to the Department proof of a valid watercraft registration or assigned watercraft registration number issued by the Arizona Game and Fish Department or U.S. Coast Guard.
- D. A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated restrictions and requirements.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-210. Envelope Permits - Non-specific and Non-reducible Vehicle or Load

A. The Department shall issue an annual or 30-day oversize envelope permit, or an annual or 30-day oversize and overweight envelope permit, according to the following criteria for a non-specific and non-reducible vehicle or load that meets the definition of envelope permit under R17-6-101, and does not exceed the maximum permitted weight computations for overweight axle group weight distribution as provided under R17-6-411:

Vehicle or load description	A non-specific and non-reducible vehicle or load that meets the definition of envelope permit under R17-6-101 and is within the maximum permitted weights provided under R17-6-411
Permit option	30-day oversize only
	30-day oversize and overweight
	Annual oversize only
	Annual oversize and overweight

Fee (A.R.S. § 28-1143)	30-day oversize only	\$150
	30-day oversize and overweight	\$500
	Annual oversize only	\$750
	Annual oversize and overweight	\$1,500

- B. An applicant for an oversize, or oversize and overweight, envelope permit shall apply to the Department and submit appropriate fees using the application procedure provided under R17-6-103.
- C. An applicant for an oversize, or oversize and overweight, envelope permit under subsection (A) for a vehicle that is a self-propelled mobile crane, drilling rig, or similar specialty equipment meeting dimensional requirements provided under R17-6-201 shall provide to the Department proof of gross weight:
 1. For an initial application, a public weighmaster’s certificate of weight and measure issued at a certified public scale once the vehicle is equipped and set for highway travel; or
 2. For a renewal application, a certification by the applicant that no dimension has changed and the vehicle does not exceed the originally certified dimensions or weights.
- D. The Department shall assess an additional service charge for:
 1. A modified permit duplicate: \$25; and
 2. Each additional power unit exceeding the original number of permitted power units: \$50.
- E. A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under R17-6-412, Table 4, unless operating in full compliance with all indicated restrictions and requirements.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-211. Western Regional Permit

- A. The Department shall issue a western regional permit for transport of a specified vehicle, combination of vehicles, or vehicle and load combination meeting specific non-reducible size and weight criteria established under the Western Regional Agreement for transport in Arizona and any other jurisdiction that is a party to the “Western Regional Agreement for the Issuance of Permits for Overweight and/or Oversize Vehicles and/or Loads Involved in Interstate Travel.” The western regional permit eliminates the need to obtain a separate permit for each jurisdiction.
- B. An applicant is eligible for the western regional permit provided under subsection (A), if the applicant’s vehicle, combination of vehicles, or vehicle and load combination meets all of the following criteria:
 1. Non-reducible;
 2. Specifically described;
 3. Width is 14 feet or less;
 4. Height is 14 feet or less;
 5. Length is 110 feet or less;
 6. Overall gross weight is 160,000 pounds or less;
 7. 600 pounds per inch of tire width;
 8. A minimum of five axles; and

Department of Transportation – Oversize and Overweight Special Permits

9. The weights of any group of axles are determined using the lesser of the vehicle weights provided by the tables in the Western Regional Manual or the following:
- 21,500 pounds per single axle;
 - 43,000 pounds per tandem axle group; or
 - 53,000 pounds per tridem axle group (wheel base is more than eight feet but not more than 13 feet).
- C. An applicant with a vehicle, combination of vehicles, or vehicle and load combination meeting all eligibility criteria provided under subsection (B), may apply for a western regional permit by completing, and submitting to the Department, a western regional permit application along with:
- Proof of valid registration in compliance with A.R.S. § 28-2153;
 - Proof of a valid IFTA license in compliance with A.R.S. § 28-5742, if applicable; and
 - All applicable fees calculated as provided under the fee schedules located in the Western Regional Manual maintained at the Arizona Central Commercial Permits Office or Ports of Entry.
- D. The Department shall issue, no more than five days before its effective date, a western regional permit valid for a period of five working days.
- E. The Department, at the request of a permit holder, may extend the western regional permit's period of validity for up to five days, if completion of the trip is precluded by weather, road conditions, or mechanical failure. An extension authorized by the Department under this Section shall be approved:
- By signature of an authorized ECD agent,
 - By telephone in an emergency situation, or
 - By authorization of the Arizona Central Commercial Permits office.
- Historical Note**
New Section made by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).
- R17-6-212. Class C Overweight, or Oversize and Overweight, Special Permit - Tridem Axle Group Configurations**
- A. The Department may issue a single trip class C overweight, or oversize and overweight, special permit for tridem axle group configurations subject to the specific routes and restrictions provided under Table 6 and the maximum permitted weight computations provided under Table 7.
- B. An applicant for a single trip class C overweight, or oversize and overweight, special permit for tridem axle group configurations shall apply to the Department using the application procedure provided under R17-6-103, and include the \$75 standard permit fee with the \$15 class C review and analysis fee provided under R17-6-204.
- C. The single trip Class C overweight, or oversize and overweight, special permit for tridem axle group configurations is restricted to a vehicle with:
- A minimum of four tires per tridem axle group;
 - A minimum of eight feet out-to-out axle width for each tridem group;
 - A minimum of eight feet distance between the center of the first axle and the center of the third axle of each tridem group;
 - A maximum of two tridem axle groups, or a maximum of one tandem axle group with one tridem axle group, spaced at least 25 feet between the center of the last axle of the front group and the center of the first axle of the rear group, with no other axles in-between the two groups; and
 - A maximum distance of 12 feet between the center of the first axle and the center of the third axle of each tridem group.
- D. A tridem axle group may be used in combination with other non-tridem axle groups only if the non-tridem axle groups do not exceed the maximum permitted weight computations for overweight axle group weight distribution under R17-6-411.
- E. A permit applicant with a vehicle, combination of vehicles, or vehicle and load combination exceeding 14 feet in width, 16 feet in height, 120 feet in length, 140,000 lbs overall gross vehicle weight, or any other dimension specified above shall continue to follow the Department's existing Class C permit application procedures provided under R17-6-204.
- Historical Note**
New Section made by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 6. Class C Overweight, or Oversize and Overweight, Special Permit Routes and Restrictions for Tridem Axle Group Configurations

The single trip class C overweight, or oversize and overweight, special permit for tridem axle group configurations may be issued by the Department for travel on State Route 68, U.S. Route 93 from milepost 67 (junction with State Route 68) to milepost 70 (junction with I-40), and Interstates 10, 19, and 40 subject to the following conditions:

Route #	Milepost #	STR #	Structure Name	Restrictions
I-10 EB	250.66	391	Rillito Creek Bridge	Travel in the right most lane
I-10 EB	267.65	1044	Earp Wash Tributary Bridge	Travel in the right most lane
I-10 EB	277.46	463	Wash Bridge	Travel in the right most lane
I-10 EB	312.77	574	Sibyl Road TI OP	Exit and bypass
I-10 EB	355.58	429	Monk Draw Bridge	Exit at 352 and merge at 355
I-10 WB	249.49	390	Canada Del Oro Bridge	Travel in the right most lane
I-10 WB	267.65	1045	Earp Wash Tributary Bridge	Travel in the right most lane
I-10 WB	299.14	73	Cornfield Canyon Bridge	Travel in the right most lane
I-10 WB	312.77	575	Sibyl Road TI OP	Exit and bypass
I-10 WB	389.38	210	Island Wash Bridge	Travel in the right most lane
I-40 EB	224.70	321	Babbitt Tank Wash Bridge	Travel in the right most lane
I-40 WB	13.61	377	Franconia Wash Bridge	Travel in the right most lane
I-40 WB	21.01	1312	Flat Top Wash Bridge	Travel in the right most lane
I-40 WB	21.84	364	Happy Jack Wash Bridge	Travel in the right most lane
I-40 WB	23.56	365	Mackenzie Wash Bridge	Travel in the right most lane
I-40 WB	144.31	440	Ash Fork ATSFRR OP	Travel in the right most lane
I-40 WB	148.91	441	Johnson Canyon Bridge	Travel in the right most lane
I-40 WB	278.03	459	Tanner Wash Bridge	Travel in the right most lane

EB = Eastbound, I = Interstate, OP = Overpass, STR # = Structure #, TI = Traffic Interchange, WB = Westbound,

Historical Note

Table 6 made by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 7. Maximum Permitted Weight Computations: Tridem Axle Group Configurations

	Distance between the center of the first axle and the center of the third axle of a tridem group:											
	0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
8'	57,960	58,061	58,161	58,262	58,363	58,463	58,564	58,664	58,765	58,866	58,966	59,067
9'	59,168	59,268	59,369	59,469	59,570	59,671	59,771	59,872	59,973	60,000	60,000	60,000
10'	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
11'	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
12'	60,000											

Computation Formula: Weight = 1.5 X 700 (L + 40)

(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:

Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 15% up to a maximum 60,000 lbs.

Historical Note

Table 7 made by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

ARTICLE 3. SAFETY REQUIREMENTS

2013 (Supp. 13-3).

Article 3, consisting of Sections R17-6-301 through R17-6-308, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

R17-6-301. General Safety Requirements

In addition to the provisions of this Article, a permittee and a driver of an oversize or overweight vehicle permitted under this Chapter, or a person or entity exempt under R17-6-102(D), shall comply with all federal motor carrier safety regulations incorporated by the Department under 17 A.A.C. Chapter 5, Article 2, as applicable to a motor carrier operating in Arizona.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7,

R17-6-302. Warning Flag Requirements

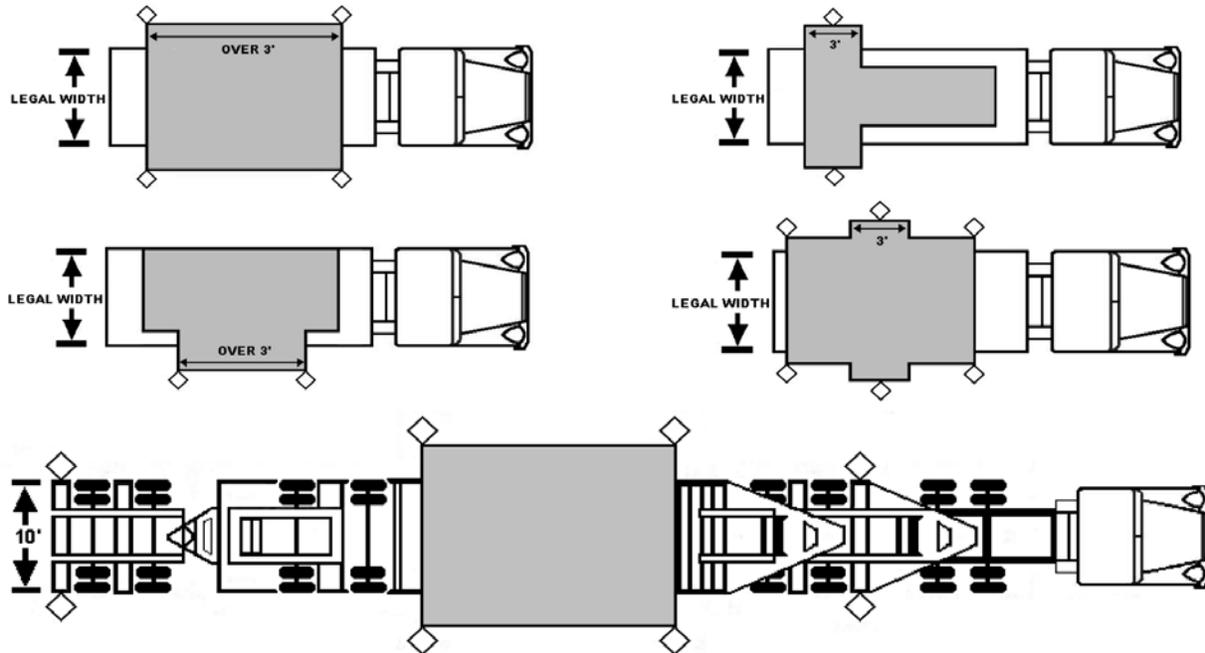
- A. Specifications. Each warning flag attached to an overwidth or overlength load shall be cloth or plastic at least 18 inches square and red or fluorescent orange in color.
- B. Display. A permittee or driver of an overwidth or overlength special permitted vehicle and load combination shall display warning flags applicable to the permittee’s vehicle and load configuration as indicated under Illustration 1.

Historical Note

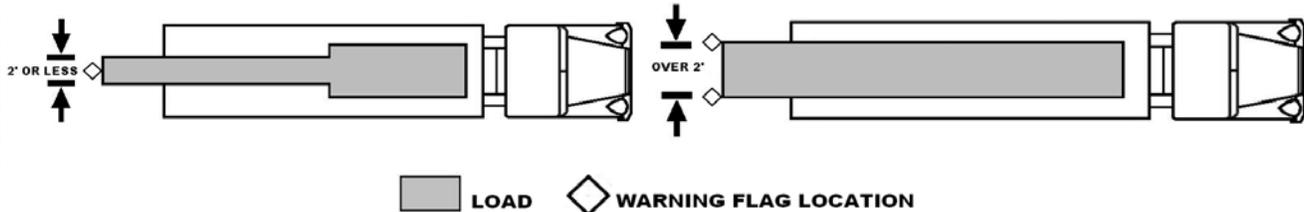
New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Illustration 1. Warning Flag Configurations

EXAMPLES FOR WARNING FLAGS ON OVERWIDTH LOADS EXTENDING MORE THAN 4 INCHES BEYOND THE OVERALL WIDTH OF THE VEHICLE



EXAMPLES FOR WARNING FLAGS ON OVERLENGTH LOADS WITH A REAR OVERHANG OF 4 FEET OR MORE FROM END OF TRAILER



LOAD WARNING FLAG LOCATION

Historical Note

New Illustration made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Illustration amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-303. Sign Requirements

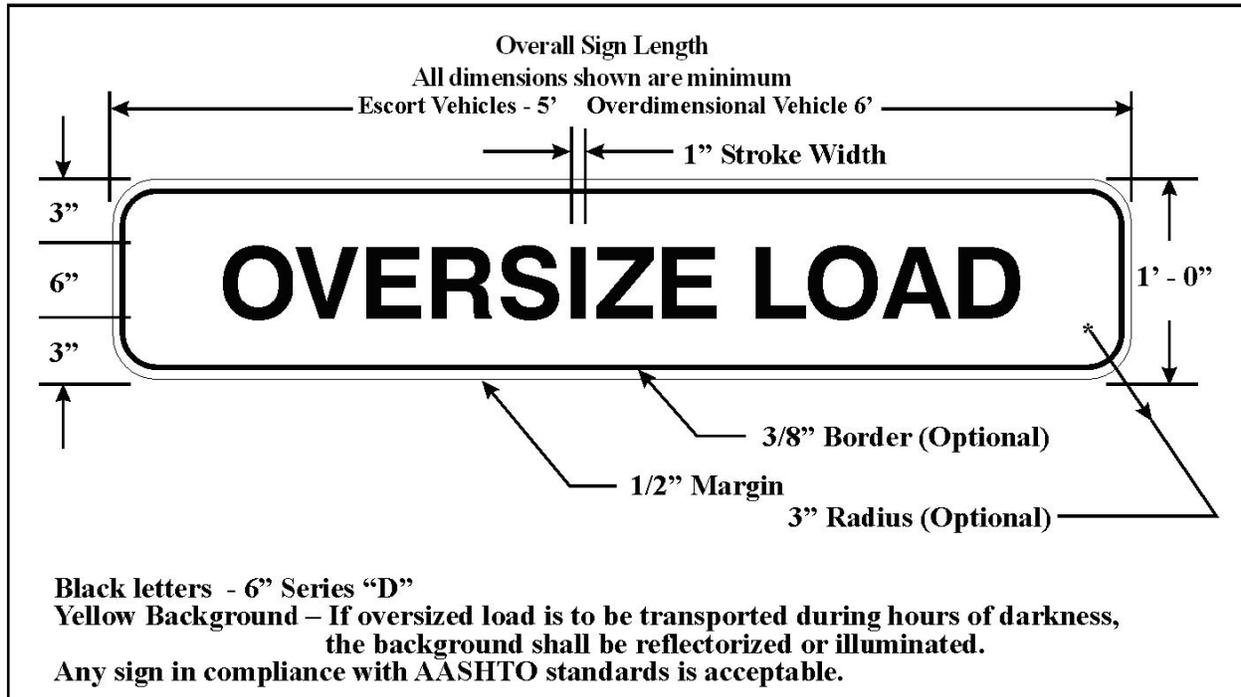
- A. A permittee shall ensure that an oversize or overweight vehicle or load displays an “OVERSIZE LOAD” sign if the vehicle or load is nine feet or more in width.
- B. A permittee shall display an “OVERSIZE LOAD” sign on any oversize or overweight special permitted vehicle or load not specified under subsection (A) if necessary to ensure maximum visibility for public safety.

- C. An “OVERSIZE LOAD” sign shall meet construction specifications provided under Illustration 2 at a minimum.
- D. A permittee shall display required “OVERSIZE LOAD” signs that are:
 1. Mounted to the front or roof of the power unit,
 2. Mounted to the rear of the load or loaded vehicle,
 3. Parallel with the road surface from side-to-side,
 4. Readable from left to right, and
 5. Clearly visible from the vehicle’s front and rear.
- E. If a permittee required to display an “OVERSIZE LOAD” sign is not transporting an oversize or overweight load, the permittee shall ensure each sign is not visible to traffic

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Illustration 2. “OVERSIZE LOAD” Sign



Historical Note

New Illustration made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Illustration amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

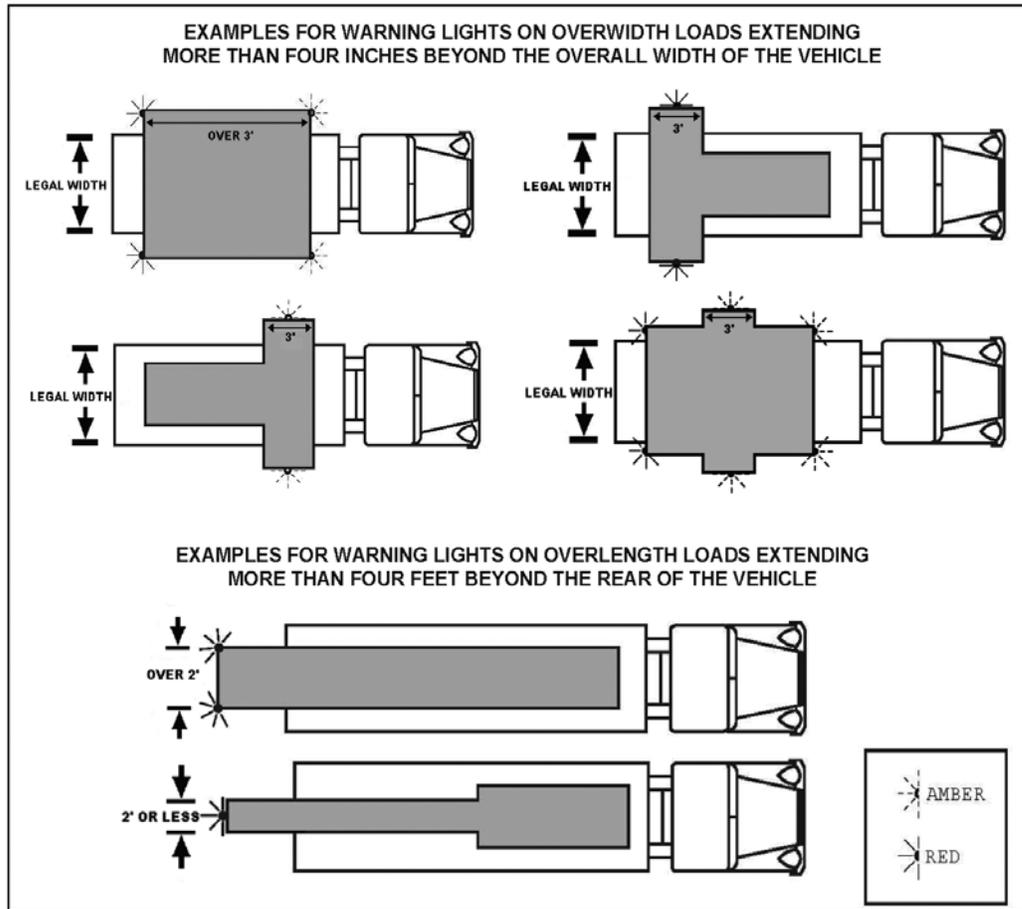
R17-6-304. Lighting Device Requirements

- A. A permittee or driver of an oversize or overweight vehicle or load shall:
 1. Comply with all applicable lighting equipment requirements under A.R.S. Title 28, Chapter 3, Article 16, and 49 CFR 393 as incorporated by reference under A.A.C. R17-5-202; and
 2. Operate with the lighting equipment illuminated as prescribed under A.R.S. §§ 28-922 and 28-935.
- B. A permittee or driver of a vehicle transporting a load that projects more than four inches beyond the overall width of the vehicle shall attach safety lighting during nighttime operation according to the requirements provided under Illustration 4, and R17-6-307, that most closely correspond to the permittee’s or driver’s vehicle and load configuration.
- C. A permittee or driver of an oversize load that projects more than three feet in front overhang, or more than four feet in rear overhang, shall attach safety lighting during nighttime operation according to the requirements provided under Illustration 4, and R17-6-307, that most closely correspond to the permittee’s or driver’s vehicle and load configuration.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3)

Illustration 4. Safety Lighting Configurations.



Historical Note

New Illustration made by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-305. Escort Vehicles

A. Service requirement.

1. A permittee transporting an oversize or overweight vehicle or load shall use all escort vehicles required by the Department as a condition of special permit issuance under this Chapter.
2. The Department shall determine whether one or more escort vehicles must accompany an oversize or overweight special permitted vehicle by considering the following in relation to the proposed transport and route:
 - a. Roadway dynamics, including surface condition, grade, width, and height limitations;
 - b. Overall dimensions of the vehicle and load;
 - c. Need for frequent stops;
 - d. Concern for public safety; and
 - e. Time of transport.
3. According to the criteria applicable under subsection (A)(2), the Department shall require two or more oversize or overweight special permitted vehicles traveling together to be accompanied by at least one escort vehicle per load.

B. Vehicle, operator, and equipment requirements.

1. A vehicle qualifies as an escort vehicle if it:
 - a. Is a passenger car or two-axle truck operating as a single unit,
 - b. Is currently registered, and
 - c. Meets insurance requirements as provided by law.
2. An escort vehicle operator, except for a law enforcement

escort, while in service under this Chapter shall:

- a. Meet all requirements under A.R.S. § 28-1110, and maintain certification through a program that meets the escort vehicle operator training and certification standards of the Commercial Vehicle Safety Alliance or an equivalent program, whether in this state or another state, that meets the same objectives;
- b. Carry in the escort vehicle the same emergency equipment required for a truck, truck tractor, or bus under A.R.S § 28-960 and 49 CFR 393.95, which shall include:
 - i. Fire extinguishers;
 - ii. Warning devices for stopped vehicles; and
 - iii. Emergency staff-mounted warning flags;
- c. Display an “OVERSIZE LOAD” sign:
 - i. Constructed for escort vehicles as provided under R17-6-303, Illustration 2;
 - ii. Mounted above the vehicle’s roofline and visible to approaching traffic from the front and rear;
 - iii. Accompanied by two flags, one mounted on each side of the oversize load sign; and
 - iv. Concealed when not in use; and
- d. Ensure continuous communication by two-way radio:
 - i. Capable of transmitting and receiving a minimum of 1/2 mile; and
 - ii. Compatible with the two-way radios used by

the driver of the escorted vehicle, law enforcement escorts, and all other accompanying escort vehicles.

C. Operation.

1. **Lighting requirement.** While in service, an escort vehicle operator shall maintain continuous illumination of headlights and overhead warning lights as prescribed under A.R.S. § 28-947.
2. **Lead and follow distance.** An escort vehicle operator shall maintain a lead or follow distance from an escorted vehicle that generally does not exceed 1,500 feet on an open state highway or 250 feet in an urban setting. When determining the appropriate lead or follow distance, an escort vehicle operator shall:
 - a. Consider traffic density, road conditions, road type, speed, and type of load;
 - b. Ensure constant radio communication with all escorts and the escorted vehicle; and
 - c. Maintain visual contact with the escorted vehicle at all times.
3. **Stop provisions at an intersection with a traffic control signal.**
 - a. When an oversize or overweight special permitted vehicle is required to stop, the lead-escort vehicle operator shall proceed through the intersection and stop safely off the roadway. The lead-escort vehicle operator shall resume an appropriate lead distance as soon as is safely possible.
 - b. When a following-escort vehicle is required to stop, the operator of an oversize or overweight special permitted vehicle shall proceed without stopping. The following-escort vehicle operator shall resume an appropriate following distance behind the oversize or overweight special permitted vehicle as soon as is safely possible after clearing an intersection.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 13 A.A.R. 866, effective March 6, 2007 (Supp. 07-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-306. Traffic Control Provisions

- A.** The Department may require additional traffic control by a uniformed certified law enforcement officer to ensure highway safety. The Department shall consider the criteria under R17-6-305(A) when determining the need for additional traffic control.
- B.** If the Department requires a law enforcement escort under R17-6-412, Table 4, or as necessary to promote public safety, the permittee or driver of the oversize or overweight special permitted vehicle shall:
 1. Contact the Arizona Department of Public Safety at least 12 hours before transport to request the appropriate number of uniformed certified law enforcement escorts required for the permitted activity; and
 2. Ensure continuous two-way radio communication during transport with all law enforcement and other escort vehicles required to accompany the permitted vehicle under R17-6-305 and R17-6-307.
- C.** If the Arizona Department of Public Safety is unable to provide the appropriate law enforcement escorts requested as provided under subsection (B), the permittee or driver of an

oversize or overweight special permitted vehicle may use any uniformed certified law enforcement escorts if at least one officer is certified for enforcement of the Federal Motor Carrier Safety Regulations of the U.S. Department of Transportation's Federal Motor Carrier Safety Administration.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-307. Projecting Load or Vehicle

- A.** The Department shall require a class A special permit for transporting a load or vehicle that projects:
 1. Two feet or less, if the projecting portion of the load or vehicle has a thickness of less than 12 inches; or
 2. Three feet or less, if the projecting portion of the load or vehicle has a thickness of 12 inches or more.
- B.** The Department shall require a class C special permit for transporting a load that projects from either side of the vehicle:
 1. More than two feet, if the height of the projecting portion of the load has a thickness of less than 12 inches; or
 2. More than three feet, if the height of the projecting portion of the load has a thickness of 12 inches or more.
- C.** A permittee of a projecting vehicle or load shall have escort vehicle accompaniment as follows:
 1. A front escort vehicle if the front load projection is longer than 20 feet, or
 2. A rear escort vehicle if rear projection is longer than 20 feet.
- D.** A permittee or driver of a projecting vehicle or load with more than a four foot front or rear overhang shall:
 1. Attach warning flags to the load as provided under R17-6-302 and Illustration 1, for daylight operation; or
 2. Attach safety lighting to the load as provided under R17-6-304 and Illustration 4, for nighttime operation.
- E.** An integral component removed from a loaded primary object may be transported on the same vehicle bearing the primary object provided the component does not cause the hauling vehicle to exceed a size or weight permitted for the primary object.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-308. Permittee or Driver Obligation to Notify Utility Companies of Overheight Transport

A permittee or driver shall notify a responsible utility company of possible disturbance or damage, as provided under A.R.S. § 40-360.43, if overhead utility lines extend across a proposed route and the permitted vehicle or load exceeds 16 feet in height or any route-specific height restriction provided under R17-6-412, Table 4.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

ARTICLE 4. TRANSPORT PROVISIONS

Article 4, consisting of Sections R17-6-401 through R17-6-412, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

R17-6-401. General Highway Operations

- A. A permittee or driver of an oversize or overweight special permitted vehicle or vehicle and load combination shall:
 - 1. Operate no earlier than one-half hour before sunrise and no later than one-half hour after sunset, exact daily times as defined under R17-6-101, except as provided under this Article, or unless the Department otherwise:
 - a. Restricts operation on a highway, or
 - b. Grants permit-specific alternate operation hours other than those listed under this subsection as a necessary condition to maintain highway safety;
 - 2. Operate in the rightmost lane of a multi-lane highway if indicated on the special permit except to overtake and pass another vehicle; and
 - 3. Maintain a minimum distance of 2,000 feet from any other oversize or overweight special permitted vehicle traveling on the same highway in the same direction except when passing.
- B. Removal of signs, guardrails or other assets from the right-of-way is not authorized under an oversize or overweight special permit and is illegal under A.R.S. § 28-7053. A separate encroachment permit issued by the Department is required to enter the right-of-way for these purposes or for any reason other than authorized public travel. The activities authorized while in the right-of-way shall be outlined in the encroachment permit.
- C. Replacement of any state-owned highway feature moved under an encroachment permit, issued pursuant to 17 A.A.C. 3, Article 5, as a result of the transport of an oversize or overweight vehicle along a traveled route, shall be detailed on the encroachment permit and completed under Department supervision.
- D. A permittee and driver of an oversize or overweight special permitted vehicle, prior to commencing transport, shall access and review the most current information on roadway conditions, closures, and restrictions using one of the following methods:
 - 1. Phone inquiry - dial 511, or
 - 2. Online inquiry - visit www.az511.gov.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-402. Speed Restriction

- A. A driver of an oversize or overweight vehicle or load shall not exceed the lower maximum speed determined by either of the following:
 - 1. A speed limit printed on an issued permit, or
 - 2. A highway posted vehicle-specific speed limit.
- B. The Department may order an alternative speed restriction to

prevent:

- 1. Hazardous traffic conditions, or
- 2. Damages to a highway or highway feature.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-403. Weather Restrictions; Hazardous Conditions

- A. Responsibility. A driver of an oversize or overweight vehicle, or vehicle and load combination, shall:
 - 1. Use the criteria provided under subsection (B) to identify unsafe roadway conditions and discontinue transport until safe to continue, and
 - 2. Comply with all official agency weather-related travel advisories prohibiting oversize or overweight transport.
- B. Determining conditions. A driver of an oversize or overweight vehicle, or vehicle and load combination, shall not transport under the following hazardous conditions:

Hazardous Conditions:	Possible Causes May Include:
Driver visibility range becomes less than 500 feet	<ul style="list-style-type: none"> • Blowing dust • Falling snow • Fog • Heavy rain
Road surface condition reduces normal traction	<ul style="list-style-type: none"> • Snow • Ice • Flooding
A load destabilizing condition endangers road surface or traffic	<ul style="list-style-type: none"> • High winds • Falling objects

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-404. Metropolitan Curfew Transport Restriction

- A. Unless otherwise provided under this Article, this Section shall apply as provided under subsections (B) and (C) to a special permitted vehicle or load that exceeds 10 feet in width, but does not exceed any of the following dimensions:
 - 1. 16 feet in height;
 - 2. 3 feet in length of front overhang;
 - 3. 10 feet in length of rear overhang;
 - 4. 120 feet in overall length; or
 - 5. 250,000 pounds.
- B. A permittee or driver of a special permitted vehicle or load described under subsection (A) may transport on a Monday through Friday during curfew hours subject to the following routes and restrictions:

Metropolitan Phoenix - Curfew Routes and Restrictions		
Route	Restriction Location (MP = Milepost)	Width Restrictions During the Curfew Hours of: 7:00 a.m. to 9:00 a.m.; and 4:00 p.m. to 6:00 p.m.
SR 202	MP 9.80 (Junction SR 101) to MP 57.24 (Junction I-10)	Over 10' - 12' = Requires rear escort Over 12' - 16' = No transport
SR 101	MP 1.21 (Junction I-10, near 99th Avenue) to MP 61.33 (Junction SR 202)	Over 10' - 12' = Requires rear escort Over 12' - 16' = No transport

C. A permittee or driver of a special permitted vehicle or load exceeding any dimension described under subsection (A) shall not transport on a Monday through Friday during curfew hours subject to the following routes and restrictions:

Metropolitan Phoenix - Curfew Routes and Restrictions		
Route	Restriction Location (MP = Milepost)	Width Restrictions During the Curfew Hours of: 7:00 a.m. to 9:00 a.m.; and 4:00 p.m. to 6:00 p.m.
I-10	MP 133.98 (Junction SR 101) to MP 161.35 (Junction SR 202, Santan)	Over 10' - 16' = No transport
I-17	MP 193.94 (Beginning of route at Junction I-10) to MP 214.96 (Junction SR 101)	Over 10' - 16' = No transport
SR 51	MP 0.00 (Junctions I-10 and SR Loop 202) to MP 15.90 (Junction SR Loop 101)	Over 10' - 16' = No transport
SR 143	MP 0.00 (Junction I-10) to MP 3.81 (McDowell Road)	Over 10' - 16' = No transport
SR 202	MP 0.00 (Junctions I-10 and SR 51) to MP 9.80 (Junction SR 101)	Over 10' - 16' = No transport
US 60	MP 172.00 (Junction I-10) to MP 190.51 (Junction SR 202)	Over 10' - 16' = No transport
Metropolitan Tucson - Curfew Routes and Restrictions		
I-10	MP 236.42 (Marana Road) to MP 270.67 (Kolb Road)	Over 10' - 16' = No transport
I-19	MP 59.09 (Valencia Road, Kilometer Post 95.00) to MP 63.09 (Junction I-10)	Over 10' - 16' = No transport
SR 77	MP 68.05 (Junction I-10) to MP 79.48 (Tangerine Road)	Over 10' - 16' = No transport
SR 86	MP 164.04 (Camino Verde Road) to MP 171.44 (Junction I-19)	Over 10' - 16' = No transport
Metropolitan Yuma - Curfew Routes and Restrictions		
US 95	MP 19.84 (32nd Street East) to MP 31.87 (Avenue 9E)	Over 10' - 16' = No transport
SB 8	MP 0.00 (California State Line) to MP 11.50 (End of route near I-8, east of Yuma)	Over 10' - 16' = No transport

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-405. Weekend Transport Allowance

- A. Except as provided under R17-6-414, a permittee or driver of an oversize or overweight special permitted vehicle, ineligible for continuous travel under R17-6-408 due to excess width or height, may transport on a weekend as provided under this Section if the vehicle or vehicle and load combination is:
 1. Over 10 feet to 16 feet in width, or
 2. Over 14 feet 6 inches to 16 feet in height, and
 3. Otherwise within the limits provided under R17-6-408.
- B. A permittee or driver of a vehicle or load described under subsection (A) may transport on a Saturday or Sunday as follows:
 1. On any non-holiday weekend;
 2. From 3:00 a.m. until 12 noon;
 3. On select routes authorized by the Department for weekend transport under R17-6-412, Table 4; and
 4. With applicable escort accompaniment as provided under subsection (D).
- C. A permittee or driver of a vehicle or load transporting under this Section shall additionally comply with all applicable

restrictions and escort vehicle requirements provided under R17-6-412, Table 4.

- D. Unless the Department requires additional escort vehicles under R17-6-412, Table 4, a permittee or driver of a vehicle or load transporting under this Section shall have escort vehicle accompaniment as follows:
 1. Over 11 to 14 feet in width requires a rear escort,
 2. Over 14 to 16 feet in width requires a front and rear escort, and
 3. Over 15 feet in height requires a front escort with a height pole.
- E. The Department may approve weekend transport under a class C special permit for a vehicle and load combination exceeding the dimensions provided under subsection (A) upon determining the exception to be in the best interest of the public.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-406. Holiday Transport Restriction

- A. Except as provided under R17-6-414, this Section applies to an oversize or overweight special permitted vehicle or load with a dimension of more than:

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1. 10 feet in width,
 2. 14 feet 6 inches in height,
 3. 3 feet in length of front overhang,
 4. 10 feet in length of rear overhang, or
 5. 120 feet in overall length.
- B.** A permittee or driver shall not transport an oversize or overweight vehicle or load described under subsection (A) in Arizona on the following holidays:
1. New Year's Day,
 2. Memorial Day,
 3. Independence Day,
 4. Labor Day,
 5. Thanksgiving Day, or
 6. Christmas Day.
- C.** A restriction on transport for a holiday listed under subsection (B) also includes days before and after a holiday as follows:
1. When a holiday occurs on a Friday, transport shall stop at 12 noon on the preceding Thursday and may resume the following Monday at one-half hour before sunrise, or Monday at 3:00 a.m. if night transport is allowed under R17-6-409;
 2. When a holiday occurs on a Saturday, transport shall stop at 12 noon on the preceding Thursday and may resume the following Monday at one-half hour before sunrise, or Monday at 3:00 a.m. if night transport is allowed under R17-6-409;
 3. When a holiday occurs on a Sunday, transport shall stop at 12 noon on the preceding Friday and may resume the following Tuesday at one-half hour before sunrise, or Tuesday at 3:00 a.m. if night transport is allowed under R17-6-409;
 4. When a holiday occurs on a Monday, transport shall stop at 12 noon on the preceding Friday and may resume the following Tuesday at one-half hour before sunrise, or Tuesday at 3:00 a.m. if night transport is allowed under R17-6-409; and
 5. When a holiday occurs on a Tuesday, Wednesday, or Thursday, transport shall stop at 12 noon on the day before the holiday and may resume the day after the holiday at one-half hour before sunrise, or the day after the holiday at 3:00 a.m. if night transport is allowed under R17-6-409.
- D.** The Department may approve holiday transport under a class C special permit for a vehicle and load combination exceeding a dimension provided under subsection (A), upon determining the exception to be in the best interest of public safety.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-407. Route-specific and Permit-specific Transport Restrictions

A permittee or driver of a class C oversize or overweight special permitted vehicle or load shall not transport on a Friday from 12 noon until 3:00 a.m. on a route designated by the Department under R17-6-412, Table 4, as being subject to route-specific or permit-specific transport restrictions.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Section R17-6-407 renumbered to R17-6-414; new Section made by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-408. Continuous Travel

A. Except as provided under R17-6-404, a permittee or driver of an oversize or overweight special permitted vehicle is eligible for continuous travel under this Section if the vehicle or vehicle and load combination does not exceed any of the following

dimensions:

1. 10 feet in width;
 2. 14 feet 6 inches in height;
 3. 3 feet in length of front overhang;
 4. 10 feet in length of rear overhang;
 5. 120 feet in overall length; or
 6. 250,000 pounds.
- B.** Unless otherwise restricted under R17-6-404, R17-6-405, R17-6-406, or R17-6-412, Table 4, a permittee or driver of a self-propelled mobile crane, drilling rig, or similar specialty equipment issued a special permit under R17-6-205, is eligible for continuous travel if the vehicle does not exceed any of the following dimensions:
1. 11 feet in width;
 2. 14 feet in height;
 3. 3 feet in length of front overhang;
 4. 10 feet in length of rear overhang;
 5. 120 feet in overall length; or
 6. 250,000 pounds.
- C.** A permittee or driver of a vehicle or load transporting under this Section shall additionally comply with all applicable restrictions and escort vehicle requirements provided under R17-6-305 and R17-6-412, Table 4.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-409. Night Transport Restriction

- A.** Unless further restricted under this Article, this Section applies to a permittee or driver of an oversize or overweight vehicle, or vehicle and load combination, within the following dimensions:
1. 16 feet or less in width;
 2. 16 feet or less in height;
 3. 3 feet or less in length of front overhang;
 4. 10 feet or less in length of rear overhang;
 5. 120 feet or less in overall length; or
 6. 250,000 pounds or less in overall weight.
- B.** A permittee or driver of a vehicle or load described under subsection (A) may transport at night as follows:
1. Beginning at 3:00 a.m. except on any day, route, or time further restricted under R17-6-404 through R17-6-406;
 2. On select routes authorized by the Department for night transport under R17-6-412, Table 4; and
 3. With applicable escort accompaniment as provided under subsection (D).
- C.** A permittee or driver of a vehicle or load transporting under this Section shall additionally comply with all applicable restrictions and escort vehicle requirements provided under R17-6-412, Table 4.
- D.** Unless the Department requires additional escort vehicles under R17-6-412, Table 4, a permittee or driver of a vehicle or load transporting under this Section shall have escort vehicle accompaniment until sunrise as follows:
1. Over 11 to 14 feet in width requires a rear escort,
 2. Over 14 to 16 feet in width requires a front and rear escort, and
 3. Over 15 feet in height requires a front escort with a height pole.
- E.** The Department may approve night transport under a class C special permit for a vehicle and load combination exceeding the dimensions provided under subsection (A) upon determining the exception to be in the best interest of public safety.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-410. Special Mobile Home Towing Restriction

- A. A vehicle towing a mobile home shall have a factory rating that corresponds with the following criteria:

Load measurement criteria	Towing vehicle factory rating
10 feet or less in width and 50 feet or less in length, including hitch	1 1/2 tons
More than 10 feet in width or more than 50 feet in length, or both	Two tons; four tires per drive axle and minimum 99 inch wheel base

- B. A mobile home transporter shall cover the open side of a mobile home module with plastic sheeting no thinner than 1.5 mil plus a rigid grillwork backing.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-411. Maximum Permitted Weights

- A. Except as provided under R17-6-211 and R17-6-212, the Department shall use the formulas and computations provided under Tables 3.01 through 3.09, and Illustration 3, to determine the maximum weights allowed on any combination of axles within the distance between the front and rear axle of a given axle group, up to a maximum of 18 feet, when issuing an oversize or overweight special permit for a non-reducible vehicle or load under this Article.
- B. The Department shall use the computations provided under R17-6-212, Table 7, to determine the maximum weights allowed for tridem axle group configurations subject to conditions, restrictions, allowances, and route limitations provided under R17-6-212, Table 6.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

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Table 3.01. Maximum Permitted Weight Computations: Axle Width - 8 Feet
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	28,000	28,000	28,000	28,000	28,000	28,000	45,675	45,763	45,850	45,938	46,025	46,113
		B	32,200	32,200	32,200	32,200	32,200	32,200	52,526	52,627	52,728	52,828	52,929	53,029
	4	A	46,200	46,288	46,375	46,463	46,550	46,638	46,725	46,813	46,900	46,988	47,075	47,163
		B	53,130	53,231	53,331	53,432	53,533	53,633	53,734	53,834	53,935	54,036	54,136	54,237
	5	A	47,250	47,338	47,425	47,513	47,600	47,688	47,775	47,863	47,950	48,038	48,125	48,213
		B	54,338	54,438	54,539	54,639	54,740	54,841	54,941	55,042	55,143	55,243	55,344	55,444
	6	A	48,300	48,388	48,475	48,563	48,650	48,738	48,825	48,913	49,000	49,088	49,175	49,263
		B	55,545	55,646	55,746	55,847	55,948	56,048	56,149	56,249	56,350	56,451	56,551	56,652
	7	A	49,350	49,438	49,525	49,613	49,700	49,788	49,875	49,963	50,050	50,138	50,225	50,313
		B	56,753	56,853	56,954	57,054	57,155	57,256	57,356	57,457	57,558	57,658	57,759	57,859
	8	A	50,400	50,488	50,575	50,663	50,750	50,838	50,925	51,013	51,100	51,188	51,275	51,363
		B	57,960	58,061	58,161	58,262	58,363	58,463	58,564	58,664	58,765	58,866	58,966	59,067
	9	A	51,450	51,538	51,625	51,713	51,800	51,888	51,975	52,063	52,150	52,238	52,325	52,413
		B	59,168	59,268	59,369	59,469	59,570	59,671	59,771	59,872	59,973	60,073	60,174	60,274
	10	A	52,500	52,588	52,675	52,763	52,850	52,938	53,025	53,113	53,200	53,288	53,375	53,463
		B	60,375	60,476	60,576	60,677	60,778	60,878	60,979	61,079	61,180	61,281	61,381	61,482
	11	A	53,550	53,638	53,725	53,813	53,900	53,988	54,075	54,163	54,250	54,338	54,425	54,513
		B	61,583	61,683	61,784	61,884	61,985	62,086	62,186	62,287	62,388	62,488	62,589	62,689
	12	A	54,600	54,688	54,775	54,863	54,950	55,038	55,125	55,213	55,300	55,388	55,475	55,563
		B	62,790	62,891	62,991	63,092	63,193	63,293	63,394	63,494	63,595	63,696	63,796	63,897
	13	A	55,650	55,738	55,825	55,913	56,000	56,088	56,175	56,263	56,350	56,438	56,525	56,613
		B	63,998	64,098	64,199	64,299	64,400	64,501	64,601	64,702	64,803	64,903	65,004	65,104
	14	A	56,700	56,788	56,875	56,963	57,050	57,138	57,225	57,313	57,400	57,488	57,575	57,663
		B	65,205	65,306	65,406	65,507	65,608	65,708	65,809	65,909	66,010	66,111	66,211	66,312
	15	A	57,750	57,838	57,925	58,013	58,100	58,188	58,275	58,363	58,450	58,538	58,625	58,713
		B	66,413	66,513	66,614	66,714	66,815	66,916	67,016	67,117	67,218	67,318	67,419	67,519
	16	A	58,800	58,888	58,975	59,063	59,150	59,238	59,325	59,413	59,500	59,588	59,675	59,763
		B	67,620	67,721	67,821	67,922	68,023	68,123	68,224	68,324	68,425	68,526	68,626	68,727
	17	A	59,850	59,938	60,025	60,113	60,200	60,288	60,375	60,463	60,550	60,638	60,725	60,813
		B	68,828	68,928	69,029	69,129	69,230	69,331	69,431	69,532	69,633	69,733	69,834	69,934
	18	A	60,900											
		B	70,035											

Computation Formula: Weight = 1.5 X 700 (L + 40)
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight only.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 15%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 3.02. Maximum Permitted Weight Computations: Axle Width - 8 Feet 3 Inches
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	28,525	28,525	28,525	28,525	28,525	28,525	46,531	46,621	46,710	46,799	46,888	46,977
		B	32,550	32,550	32,550	32,550	32,550	32,550	53,097	53,199	53,301	53,402	53,504	53,606
	4	A	47,066	47,155	47,245	47,334	47,423	47,512	47,601	47,690	47,779	47,869	47,958	48,047
		B	53,708	53,809	53,911	54,013	54,114	54,216	54,318	54,420	54,521	54,623	54,725	54,826
	5	A	48,136	48,225	48,314	48,403	48,493	48,582	48,671	48,760	48,849	48,938	49,027	49,116
		B	54,928	55,030	55,132	55,233	55,335	55,437	55,538	55,640	55,742	55,844	55,945	56,047
	6	A	49,206	49,295	49,384	49,473	49,562	49,651	49,740	49,830	49,919	50,008	50,097	50,186
		B	56,149	56,250	56,352	56,454	56,556	56,657	56,759	56,861	56,963	57,064	57,166	57,268
	7	A	50,275	50,364	50,454	50,543	50,632	50,721	50,810	50,899	50,988	51,078	51,167	51,256
		B	57,369	57,471	57,573	57,675	57,776	57,878	57,980	58,081	58,183	58,285	58,387	58,488
	8	A	51,345	51,434	51,523	51,612	51,702	51,791	51,880	51,969	52,058	52,147	52,236	52,326
		B	58,590	58,692	58,793	58,895	58,997	59,099	59,200	59,302	59,404	59,505	59,607	59,709
	9	A	52,415	52,504	52,593	52,682	52,771	52,860	52,950	53,039	53,128	53,217	53,306	53,395
		B	59,811	59,912	60,014	60,116	60,218	60,319	60,421	60,523	60,624	60,726	60,828	60,930
	10	A	53,484	53,574	53,663	53,752	53,841	53,930	54,019	54,108	54,198	54,287	54,376	54,465
		B	61,031	61,133	61,235	61,336	61,438	61,540	61,642	61,743	61,845	61,947	62,048	62,150
	11	A	54,554	54,643	54,732	54,821	54,911	55,000	55,089	55,178	55,267	55,356	55,445	55,535
		B	62,252	62,354	62,455	62,557	62,659	62,760	62,862	62,964	63,066	63,167	63,269	63,371
	12	A	55,624	55,713	55,802	55,891	55,980	56,069	56,159	56,248	56,337	56,426	56,515	56,604
		B	63,473	63,574	63,676	63,778	63,879	63,981	64,083	64,185	64,286	64,388	64,490	64,591
	13	A	56,693	56,783	56,872	56,961	57,050	57,139	57,228	57,317	57,407	57,496	57,585	57,674
		B	64,693	64,795	64,897	64,998	65,100	65,202	65,303	65,405	65,507	65,609	65,710	65,812
	14	A	57,763	57,852	57,941	58,031	58,120	58,209	58,298	58,387	58,476	58,565	58,655	58,744
		B	65,914	66,015	66,117	66,219	66,321	66,422	66,524	66,626	66,728	66,829	66,931	67,033
	15	A	58,833	58,922	59,011	59,100	59,189	59,279	59,368	59,457	59,546	59,635	59,724	59,813
		B	67,134	67,236	67,338	67,440	67,541	67,643	67,745	67,846	67,948	68,050	68,152	68,253
	16	A	59,903	59,992	60,081	60,170	60,259	60,348	60,437	60,526	60,616	60,705	60,794	60,883
		B	68,355	68,457	68,558	68,660	68,762	68,864	68,965	69,067	69,169	69,270	69,372	69,474
	17	A	60,972	61,061	61,150	61,240	61,329	61,418	61,507	61,596	61,685	61,774	61,864	61,953
		B	69,576	69,677	69,779	69,881	69,983	70,084	70,186	70,288	70,389	70,491	70,593	70,695
	18	A	62,042											
		B	70,796											

Computation Formula: $Weight = 1.5 \times 700 (L + 40)$
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 1.875%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 16.25%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Department of Transportation – Oversize and Overweight Special Permits

Table 3.03. Maximum Permitted Weight Computations: Axle Width - 8 Feet 6 Inches
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	29,050	29,050	29,050	29,050	29,050	29,050	47,388	47,479	47,569	47,660	47,751	47,842
		B	32,900	32,900	32,900	32,900	32,900	32,900	53,668	53,771	53,874	53,977	54,079	54,182
	4	A	47,933	48,023	48,114	48,205	48,296	48,386	48,477	48,568	48,659	48,750	48,840	48,931
		B	54,285	54,388	54,491	54,593	54,696	54,799	54,902	55,005	55,108	55,210	55,313	55,416
	5	A	49,022	49,113	49,203	49,294	49,385	49,476	49,567	49,657	49,748	49,839	49,930	50,020
		B	55,519	55,622	55,724	55,827	55,930	56,033	56,136	56,238	56,341	56,444	56,547	56,650
	6	A	50,111	50,202	50,293	50,384	50,474	50,565	50,656	50,747	50,838	50,928	51,019	51,110
		B	56,753	56,855	56,958	57,061	57,164	57,267	57,369	57,472	57,575	57,678	57,781	57,883
	7	A	51,201	51,291	51,382	51,473	51,564	51,655	51,745	51,836	51,927	52,018	52,108	52,199
		B	57,986	58,089	58,192	58,295	58,398	58,500	58,603	58,706	58,809	58,912	59,014	59,117
	8	A	52,290	52,381	52,472	52,562	52,653	52,744	52,835	52,925	53,016	53,107	53,198	53,289
		B	59,220	59,323	59,426	59,528	59,631	59,734	59,837	59,940	60,043	60,145	60,248	60,351
	9	A	53,379	53,470	53,561	53,652	53,743	53,833	53,924	54,015	54,106	54,196	54,287	54,378
		B	60,454	60,557	60,659	60,762	60,865	60,968	61,071	61,173	61,276	61,379	61,482	61,585
	10	A	54,469	54,560	54,650	54,741	54,832	54,923	55,013	55,104	55,195	55,286	55,377	55,467
		B	61,688	61,790	61,893	61,996	62,099	62,202	62,304	62,407	62,510	62,613	62,716	62,818
	11	A	55,558	55,649	55,740	55,830	55,921	56,012	56,103	56,194	56,284	56,375	56,466	56,557
		B	62,921	63,024	63,127	63,230	63,333	63,435	63,538	63,641	63,744	63,847	63,949	64,052
	12	A	56,648	56,738	56,829	56,920	57,011	57,101	57,192	57,283	57,374	57,465	57,555	57,646
		B	64,155	64,258	64,361	64,463	64,566	64,669	64,772	64,875	64,978	65,080	65,183	65,286
	13	A	57,737	57,828	57,918	58,009	58,100	58,191	58,282	58,372	58,463	58,554	58,645	58,735
		B	65,389	65,492	65,594	65,697	65,800	65,903	66,006	66,108	66,211	66,314	66,417	66,520
	14	A	58,826	58,917	59,008	59,099	59,189	59,280	59,371	59,462	59,553	59,643	59,734	59,825
		B	66,623	66,725	66,828	66,931	67,034	67,137	67,239	67,342	67,445	67,548	67,651	67,753
	15	A	59,916	60,006	60,097	60,188	60,279	60,370	60,460	60,551	60,642	60,733	60,823	60,914
		B	67,856	67,959	68,062	68,165	68,268	68,370	68,473	68,576	68,679	68,782	68,884	68,987
	16	A	61,005	61,096	61,187	61,277	61,368	61,459	61,550	61,640	61,731	61,822	61,913	62,004
		B	69,090	69,193	69,296	69,398	69,501	69,604	69,707	69,810	69,913	70,015	70,118	70,221
	17	A	62,094	62,185	62,276	62,367	62,458	62,548	62,639	62,730	62,821	62,911	63,002	63,093
		B	70,324	70,427	70,529	70,632	70,735	70,838	70,941	71,043	71,146	71,249	71,352	71,455
	18	A	63,184											
		B	71,558											

Computation Formula: Weight = 1.5 X 700 (L + 40)
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 3.75%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 17.5%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 3.04. Maximum Permitted Weight Computations: Axle Width - 8 Feet 9 Inches
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	29,575	29,575	29,575	29,575	29,575	29,575	48,244	48,337	48,429	48,521	48,614	48,706
		B	33,250	33,250	33,250	33,250	33,250	33,250	54,239	54,343	54,447	54,551	54,655	54,759
	4	A	48,799	48,891	48,984	49,076	49,168	49,261	49,353	49,446	49,538	49,631	49,723	49,815
		B	54,863	54,966	55,070	55,174	55,278	55,382	55,486	55,590	55,694	55,798	55,902	56,005
	5	A	49,908	50,000	50,093	50,185	50,278	50,370	50,462	50,555	50,647	50,740	50,832	50,924
		B	56,109	56,213	56,317	56,421	56,525	56,629	56,733	56,837	56,941	57,045	57,148	57,252
	6	A	51,017	51,109	51,202	51,294	51,387	51,479	51,571	51,664	51,756	51,849	51,941	52,034
		B	57,356	57,460	57,564	57,668	57,772	57,876	57,980	58,084	58,188	58,291	58,395	58,499
	7	A	52,126	52,218	52,311	52,403	52,496	52,588	52,680	52,773	52,865	52,958	53,050	53,143
		B	58,603	58,707	58,811	58,915	59,019	59,123	59,227	59,330	59,434	59,538	59,642	59,746
	8	A	53,235	53,327	53,420	53,512	53,605	53,697	53,790	53,882	53,974	54,067	54,159	54,252
		B	59,850	59,954	60,058	60,162	60,266	60,370	60,473	60,577	60,681	60,785	60,889	60,993
	9	A	54,344	54,436	54,529	54,621	54,714	54,806	54,899	54,991	55,083	55,176	55,268	55,361
		B	61,097	61,201	61,305	61,409	61,513	61,616	61,720	61,824	61,928	62,032	62,136	62,240
	10	A	55,453	55,546	55,638	55,730	55,823	55,915	56,008	56,100	56,193	56,285	56,377	56,470
		B	62,344	62,448	62,552	62,655	62,759	62,863	62,967	63,071	63,175	63,279	63,383	63,487
	11	A	56,562	56,655	56,747	56,839	56,932	57,024	57,117	57,209	57,302	57,394	57,486	57,579
		B	63,591	63,695	63,798	63,902	64,006	64,110	64,214	64,318	64,422	64,526	64,630	64,734
	12	A	57,671	57,764	57,856	57,949	58,041	58,133	58,226	58,318	58,411	58,503	58,595	58,688
		B	64,838	64,941	65,045	65,149	65,253	65,357	65,461	65,565	65,669	65,773	65,877	65,980
	13	A	58,780	58,873	58,965	59,058	59,150	59,242	59,335	59,427	59,520	59,612	59,705	59,797
		B	66,084	66,188	66,292	66,396	66,500	66,604	66,708	66,812	66,916	67,020	67,123	67,227
	14	A	59,889	59,982	60,074	60,167	60,259	60,351	60,444	60,536	60,629	60,721	60,814	60,906
		B	67,331	67,435	67,539	67,643	67,747	67,851	67,955	68,059	68,163	68,266	68,370	68,474
	15	A	60,998	61,091	61,183	61,276	61,368	61,461	61,553	61,645	61,738	61,830	61,923	62,015
		B	68,578	68,682	68,786	68,890	68,994	69,098	69,202	69,305	69,409	69,513	69,617	69,721
	16	A	62,108	62,200	62,292	62,385	62,477	62,570	62,662	62,754	62,847	62,939	63,032	63,124
		B	69,825	69,929	70,033	70,137	70,241	70,345	70,448	70,552	70,656	70,760	70,864	70,968
	17	A	63,217	63,309	63,401	63,494	63,586	63,679	63,771	63,864	63,956	64,048	64,141	64,233
		B	71,072	71,176	71,280	71,384	71,488	71,591	71,695	71,799	71,903	72,007	72,111	72,215
	18	A	64,326											
		B	72,319											

Computation Formula: Weight = 1.5 X 700 (L + 40)
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 5.625%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 18.75%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Department of Transportation – Oversize and Overweight Special Permits

Table 3.05. Maximum Permitted Weight Computations: Axle Width - 9 Feet
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	30,100	30,100	30,100	30,100	30,100	30,100	49,101	49,195	49,289	49,383	49,477	49,571
		B	33,600	33,600	33,600	33,600	33,600	33,600	54,810	54,915	55,020	55,125	55,230	55,335
	4	A	49,665	49,759	49,853	49,947	50,041	50,135	50,229	50,323	50,418	50,512	50,606	50,700
		B	55,440	55,545	55,650	55,755	55,860	55,965	56,070	56,175	56,280	56,385	56,490	56,595
	5	A	50,794	50,888	50,982	51,076	51,170	51,264	51,358	51,452	51,546	51,640	51,734	51,828
		B	56,700	56,805	56,910	57,015	57,120	57,225	57,330	57,435	57,540	57,645	57,750	57,855
	6	A	51,923	52,017	52,111	52,205	52,299	52,393	52,487	52,581	52,675	52,769	52,863	52,957
		B	57,960	58,065	58,170	58,275	58,380	58,485	58,590	58,695	58,800	58,905	59,010	59,115
	7	A	53,051	53,145	53,239	53,333	53,428	53,522	53,616	53,710	53,804	53,898	53,992	54,086
		B	59,220	59,325	59,430	59,535	59,640	59,745	59,850	59,955	60,060	60,165	60,270	60,375
	8	A	54,180	54,274	54,368	54,462	54,556	54,650	54,744	54,838	54,933	55,027	55,121	55,215
		B	60,480	60,585	60,690	60,795	60,900	61,005	61,110	61,215	61,320	61,425	61,530	61,635
	9	A	55,309	55,403	55,497	55,591	55,685	55,779	55,873	55,967	56,061	56,155	56,249	56,343
		B	61,740	61,845	61,950	62,055	62,160	62,265	62,370	62,475	62,580	62,685	62,790	62,895
	10	A	56,438	56,532	56,626	56,720	56,814	56,908	57,002	57,096	57,190	57,284	57,378	57,472
		B	63,000	63,105	63,210	63,315	63,420	63,525	63,630	63,735	63,840	63,945	64,050	64,155
	11	A	57,566	57,660	57,754	57,848	57,943	58,037	58,131	58,225	58,319	58,413	58,507	58,601
		B	64,260	64,365	64,470	64,575	64,680	64,785	64,890	64,995	65,100	65,205	65,310	65,415
	12	A	58,695	58,789	58,883	58,977	59,071	59,165	59,259	59,353	59,448	59,542	59,636	59,730
		B	65,520	65,625	65,730	65,835	65,940	66,045	66,150	66,255	66,360	66,465	66,570	66,675
	13	A	59,824	59,918	60,012	60,106	60,200	60,294	60,388	60,482	60,576	60,670	60,764	60,858
		B	66,780	66,885	66,990	67,095	67,200	67,305	67,410	67,515	67,620	67,725	67,830	67,935
	14	A	60,953	61,047	61,141	61,235	61,329	61,423	61,517	61,611	61,705	61,799	61,893	61,987
		B	68,040	68,145	68,250	68,355	68,460	68,565	68,670	68,775	68,880	68,985	69,090	69,195
	15	A	62,081	62,175	62,269	62,363	62,458	62,552	62,646	62,740	62,834	62,928	63,022	63,116
		B	69,300	69,405	69,510	69,615	69,720	69,825	69,930	70,035	70,140	70,245	70,350	70,455
	16	A	63,210	63,304	63,398	63,492	63,586	63,680	63,774	63,868	63,963	64,057	64,151	64,245
		B	70,560	70,665	70,770	70,875	70,980	71,085	71,190	71,295	71,400	71,505	71,610	71,715
	17	A	64,339	64,433	64,527	64,621	64,715	64,809	64,903	64,997	65,091	65,185	65,279	65,373
		B	71,820	71,925	72,030	72,135	72,240	72,345	72,450	72,555	72,660	72,765	72,870	72,975
	18	A	65,468											
		B	73,080											

Computation Formula: Weight = 1.5 X 700 (L + 40)
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 7.5%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 20%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 3.06. Maximum Permitted Weight Computations: Axle Width - 9 Feet 3 Inches
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	30,625	30,625	30,625	30,625	30,625	30,625	49,957	50,053	50,148	50,244	50,340	50,436
		B	33,950	33,950	33,950	33,950	33,950	33,950	55,381	55,487	55,593	55,699	55,805	55,911
	4	A	50,531	50,627	50,723	50,818	50,914	51,010	51,105	51,201	51,297	51,393	51,488	51,584
		B	56,018	56,124	56,230	56,336	56,442	56,548	56,654	56,760	56,866	56,972	57,078	57,185
	5	A	51,680	51,775	51,871	51,967	52,063	52,158	52,254	52,350	52,445	52,541	52,637	52,732
		B	57,291	57,397	57,503	57,609	57,715	57,821	57,927	58,033	58,139	58,245	58,352	58,458
	6	A	52,828	52,924	53,020	53,115	53,211	53,307	53,402	53,498	53,594	53,689	53,785	53,881
		B	58,564	58,670	58,776	58,882	58,988	59,094	59,200	59,306	59,413	59,519	59,625	59,731
	7	A	53,977	54,072	54,168	54,264	54,359	54,455	54,551	54,646	54,742	54,838	54,934	55,029
		B	59,837	59,943	60,049	60,155	60,261	60,367	60,473	60,580	60,686	60,792	60,898	61,004
	8	A	55,125	55,221	55,316	55,412	55,508	55,604	55,699	55,795	55,891	55,986	56,082	56,178
		B	61,110	61,216	61,322	61,428	61,534	61,640	61,747	61,853	61,959	62,065	62,171	62,277
	9	A	56,273	56,369	56,465	56,561	56,656	56,752	56,848	56,943	57,039	57,135	57,230	57,326
		B	62,383	62,489	62,595	62,701	62,808	62,914	63,020	63,126	63,232	63,338	63,444	63,550
	10	A	57,422	57,518	57,613	57,709	57,805	57,900	57,996	58,092	58,188	58,283	58,379	58,475
		B	63,656	63,762	63,868	63,975	64,081	64,187	64,293	64,399	64,505	64,611	64,717	64,823
	11	A	58,570	58,666	58,762	58,857	58,953	59,049	59,145	59,240	59,336	59,432	59,527	59,623
		B	64,929	65,035	65,142	65,248	65,354	65,460	65,566	65,672	65,778	65,884	65,990	66,096
	12	A	59,719	59,814	59,910	60,006	60,102	60,197	60,293	60,389	60,484	60,580	60,676	60,771
		B	66,203	66,309	66,415	66,521	66,627	66,733	66,839	66,945	67,051	67,157	67,263	67,370
	13	A	60,867	60,963	61,059	61,154	61,250	61,346	61,441	61,537	61,633	61,729	61,824	61,920
		B	67,476	67,582	67,688	67,794	67,900	68,006	68,112	68,218	68,324	68,430	68,537	68,643
	14	A	62,016	62,111	62,207	62,303	62,398	62,494	62,590	62,686	62,781	62,877	62,973	63,068
		B	68,749	68,855	68,961	69,067	69,173	69,279	69,385	69,491	69,598	69,704	69,810	69,916
	15	A	63,164	63,260	63,355	63,451	63,547	63,643	63,738	63,834	63,930	64,025	64,121	64,217
		B	70,022	70,128	70,234	70,340	70,446	70,552	70,658	70,765	70,871	70,977	71,083	71,189
	16	A	64,313	64,408	64,504	64,600	64,695	64,791	64,887	64,982	65,078	65,174	65,270	65,365
		B	71,295	71,401	71,507	71,613	71,719	71,825	71,932	72,038	72,144	72,250	72,356	72,462
	17	A	65,461	65,557	65,652	65,748	65,844	65,939	66,035	66,131	66,227	66,322	66,418	66,514
		B	72,568	72,674	72,780	72,886	72,993	73,099	73,205	73,311	73,417	73,523	73,629	73,735
	18	A	66,609											
		B	73,841											

Computation Formula: Weight = 1.5 X 700 (L + 40)
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 9.375%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 21.25%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

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Table 3.07. Maximum Permitted Weight Computations: Axle Width - 9 Feet 6 Inches
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	31,150	31,150	31,150	31,150	31,150	31,150	50,813	50,911	51,008	51,105	51,203	51,300
		B	34,300	34,000	34,300	34,300	34,300	34,300	55,952	56,059	56,166	56,273	56,381	56,488
	4	A	51,398	51,495	51,592	51,690	51,787	51,884	51,982	52,079	52,176	52,274	52,371	52,468
		B	56,595	56,702	56,809	56,917	57,024	57,131	57,238	57,345	57,453	57,560	57,667	57,774
	5	A	52,566	52,663	52,760	52,858	52,955	53,052	53,150	53,247	53,344	53,442	53,539	53,636
		B	57,881	57,988	58,096	58,203	58,310	58,417	58,524	58,632	58,739	58,846	58,953	59,060
	6	A	53,734	53,831	53,928	54,026	54,123	54,220	54,318	54,415	54,513	54,610	54,707	54,805
		B	59,168	59,275	59,382	59,489	59,596	59,703	59,811	59,918	60,025	60,132	60,239	60,347
	7	A	54,902	54,999	55,097	55,194	55,291	55,389	55,486	55,583	55,681	55,778	55,875	55,973
		B	60,454	60,561	60,668	60,775	60,883	60,990	61,097	61,204	61,311	61,418	61,526	61,633
	8	A	56,070	56,167	56,265	56,362	56,459	56,557	56,654	56,751	56,849	56,946	57,043	57,141
		B	61,740	61,847	61,954	62,062	62,169	62,276	62,383	62,490	62,598	62,705	62,812	62,919
	9	A	57,238	57,335	57,433	57,530	57,628	57,725	57,822	57,920	58,017	58,114	58,212	58,309
		B	63,026	63,133	63,241	63,348	63,455	63,562	63,669	63,777	63,884	63,991	64,098	64,205
	10	A	58,406	58,504	58,601	58,698	58,796	58,893	58,990	59,088	59,185	59,282	59,380	59,477
		B	64,313	64,420	64,527	64,634	64,741	64,848	64,956	65,063	65,170	65,277	65,384	65,492
	11	A	59,574	59,672	59,769	59,866	59,964	60,061	60,158	60,256	60,353	60,450	60,548	60,645
		B	65,599	65,706	65,813	65,920	66,028	66,135	66,242	66,349	66,456	66,563	66,671	66,778
	12	A	60,743	60,840	60,937	61,035	61,132	61,229	61,327	61,424	61,521	61,619	61,716	61,813
		B	66,885	66,992	67,099	67,207	67,314	67,421	67,528	67,635	67,743	67,850	67,957	68,064
	13	A	61,911	62,008	62,105	62,203	62,300	62,397	62,495	62,592	62,689	62,787	62,884	62,981
		B	68,171	68,278	68,386	68,493	68,600	68,707	68,814	68,922	69,029	69,136	69,243	69,350
	14	A	63,079	63,176	63,273	63,371	63,468	63,565	63,663	63,760	63,858	63,955	64,052	64,150
		B	69,458	69,565	69,672	69,779	69,886	69,993	70,101	70,208	70,315	70,422	70,529	70,637
	15	A	64,247	64,344	64,442	64,539	64,636	64,734	64,831	64,928	65,026	65,123	65,220	65,318
		B	70,744	70,851	70,958	71,065	71,173	71,280	71,387	71,494	71,601	71,708	71,816	71,923
	16	A	65,415	65,512	65,610	65,707	65,804	65,902	65,999	66,096	66,194	66,291	66,388	66,486
		B	72,030	72,137	72,244	72,352	72,459	72,566	72,673	72,780	72,888	72,995	73,102	73,209
	17	A	66,583	66,680	66,778	66,875	66,973	67,070	67,167	67,265	67,362	67,459	67,557	67,654
		B	73,316	73,423	73,531	73,638	73,745	73,852	73,959	74,067	74,174	74,281	74,388	74,495
	18	A	67,751											
		B	74,603											

Computation Formula: Weight = 1.5 X 700 (L + 40)
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 11.25%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 22.5%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 3.08. Maximum Permitted Weight Computations: Axle Width - 9 Feet 9 Inches
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	31,675	31,675	31,675	31,675	31,675	31,675	51,670	51,769	51,868	51,967	52,066	52,165
		B	34,650	34,650	34,650	34,650	34,650	34,650	56,523	56,631	56,739	56,848	56,956	57,064
	4	A	52,264	52,363	52,462	52,561	52,660	52,759	52,858	52,957	53,056	53,155	53,254	53,353
		B	57,173	57,281	57,389	57,497	57,606	57,714	57,822	57,930	58,039	58,147	58,255	58,364
	5	A	53,452	53,551	53,650	53,749	53,848	53,946	54,045	54,144	54,243	54,342	54,441	54,540
		B	58,472	58,580	58,688	58,797	58,905	59,013	59,122	59,230	59,338	59,446	59,555	59,663
	6	A	54,639	54,738	54,837	54,936	55,035	55,134	55,233	55,332	55,431	55,530	55,629	55,728
		B	59,771	59,880	59,988	60,096	60,204	60,313	60,421	60,529	60,638	60,746	60,854	60,962
	7	A	55,827	55,926	56,025	56,124	56,223	56,322	56,421	56,520	56,619	56,718	56,817	56,916
		B	61,071	61,179	61,287	61,395	61,504	61,612	61,720	61,829	61,937	62,045	62,153	62,262
	8	A	57,015	57,114	57,213	57,312	57,411	57,510	57,609	57,708	57,807	57,906	58,005	58,104
		B	62,370	62,478	62,587	62,695	62,803	62,911	63,020	63,128	63,236	63,345	63,453	63,561
	9	A	58,203	58,302	58,401	58,500	58,599	58,698	58,797	58,896	58,995	59,094	59,193	59,292
		B	63,669	63,778	63,886	63,994	64,103	64,211	64,319	64,427	64,536	64,644	64,752	64,860
	10	A	59,391	59,490	59,589	59,688	59,787	59,886	59,985	60,084	60,183	60,281	60,380	60,479
		B	64,969	65,077	65,185	65,294	65,402	65,510	65,618	65,727	65,835	65,943	66,052	66,160
	11	A	60,578	60,677	60,776	60,875	60,974	61,073	61,172	61,271	61,370	61,469	61,568	61,667
		B	66,268	66,376	66,485	66,593	66,701	66,810	66,918	67,026	67,134	67,243	67,351	67,459
	12	A	61,766	61,865	61,964	62,063	62,162	62,261	62,360	62,459	62,558	62,657	62,756	62,855
		B	67,568	67,676	67,784	67,892	68,001	68,109	68,217	68,325	68,434	68,542	68,650	68,759
	13	A	62,954	63,053	63,152	63,251	63,350	63,449	63,548	63,647	63,746	63,845	63,944	64,043
		B	68,867	68,975	69,083	69,192	69,300	69,408	69,517	69,625	69,733	69,841	69,950	70,058
	14	A	64,142	64,241	64,340	64,439	64,538	64,637	64,736	64,835	64,934	65,033	65,132	65,231
		B	70,166	70,275	70,383	70,491	70,599	70,708	70,816	70,924	71,033	71,141	71,249	71,357
	15	A	65,330	65,429	65,528	65,627	65,726	65,825	65,924	66,023	66,122	66,221	66,320	66,419
		B	71,466	71,574	71,682	71,790	71,899	72,007	72,115	72,224	72,332	72,440	72,548	72,657
	16	A	66,518	66,616	66,715	66,814	66,913	67,012	67,111	67,210	67,309	67,408	67,507	67,606
		B	72,765	72,873	72,982	73,090	73,198	73,306	73,415	73,523	73,631	73,740	73,848	73,956
	17	A	67,705	67,804	67,903	68,002	68,101	68,200	68,299	68,398	68,497	68,596	68,695	68,794
		B	74,064	74,173	74,281	74,389	74,498	74,606	74,714	74,822	74,931	75,039	75,147	75,255
	18	A	68,893											
		B	75,364											

Computation Formula: Weight = 1.5 X 700 (L + 40)
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 13.125%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 23.75%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

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Table 3.09. Maximum Permitted Weight Computations: Axle Width - 10 Feet
Overweight Axle Group Chart

Distance between the center of the front axle and the center of the rear axle of a given group.

		Inches												
		0	1	2	3	4	5	6	7	8	9	10	11	
Feet	3	A	32,200	32,200	32,200	32,200	32,200	32,200	52,526	52,627	52,728	52,828	52,929	53,029
		B	35,000	35,000	35,000	35,000	35,000	35,000	57,094	57,203	57,313	57,422	57,531	57,641
	4	A	53,130	53,231	53,331	53,432	53,533	53,633	53,734	53,834	53,935	54,036	54,136	54,237
		B	57,750	57,859	57,969	58,078	58,188	58,297	58,406	58,516	58,625	58,734	58,844	58,953
	5	A	54,338	54,438	54,539	54,639	54,740	54,841	54,941	55,042	55,143	55,243	55,344	55,444
		B	59,063	59,172	59,281	59,391	59,500	59,609	59,719	59,828	59,938	60,047	60,156	60,266
	6	A	55,545	55,646	55,746	55,847	55,948	56,048	56,149	56,249	56,350	56,451	56,551	56,652
		B	60,375	60,484	60,594	60,703	60,813	60,922	61,031	61,141	61,250	61,359	61,469	61,578
	7	A	56,753	56,853	56,954	57,054	57,155	57,256	57,356	57,457	57,558	57,658	57,759	57,859
		B	61,688	61,797	61,906	62,016	62,125	62,234	62,344	62,453	62,563	62,672	62,781	62,891
	8	A	57,960	58,061	58,161	58,262	58,363	58,463	58,564	58,664	58,765	58,866	58,966	59,067
		B	63,000	63,109	63,219	63,328	63,438	63,547	63,656	63,766	63,875	63,984	64,094	64,203
	9	A	59,168	59,268	59,369	59,469	59,570	59,671	59,771	59,872	59,973	60,073	60,174	60,274
		B	64,313	64,422	64,531	64,641	64,750	64,859	64,969	65,078	65,188	65,297	65,406	65,516
	10	A	60,375	60,476	60,576	60,677	60,778	60,878	60,979	61,079	61,180	61,281	61,381	61,482
		B	65,625	65,734	65,844	65,953	66,063	66,172	66,281	66,391	66,500	66,609	66,719	66,828
	11	A	61,583	61,683	61,784	61,884	61,985	62,086	62,186	62,287	62,388	62,488	62,589	62,689
		B	66,938	67,047	67,156	67,266	67,375	67,484	67,594	67,703	67,813	67,922	68,031	68,141
	12	A	62,790	62,891	62,991	63,092	63,193	63,293	63,394	63,494	63,595	63,696	63,796	63,897
		B	68,250	68,359	68,469	68,578	68,688	68,797	68,906	69,016	69,125	69,234	69,344	69,453
	13	A	63,998	64,098	64,199	64,299	64,400	64,501	64,601	64,702	64,803	64,903	65,004	65,104
		B	69,563	69,672	69,781	69,891	70,000	70,109	70,219	70,328	70,438	70,547	70,656	70,766
	14	A	65,205	65,306	65,406	65,507	65,608	65,708	65,809	65,909	66,010	66,111	66,211	66,312
		B	70,875	70,984	71,094	71,203	71,313	71,422	71,531	71,641	71,750	71,859	71,969	72,078
	15	A	66,413	66,513	66,614	66,714	66,815	66,916	67,016	67,117	67,218	67,318	67,419	67,519
		B	72,188	72,297	72,406	72,516	72,625	72,734	72,844	72,953	73,063	73,172	73,281	73,391
	16	A	67,620	67,721	67,821	67,922	68,023	68,123	68,224	68,324	68,425	68,526	68,626	68,727
		B	73,500	73,609	73,719	73,828	73,938	74,047	74,156	74,266	74,375	74,484	74,594	74,703
	17	A	68,828	68,928	69,029	69,129	69,230	69,331	69,431	69,532	69,633	69,733	69,834	69,934
		B	74,813	74,922	75,031	75,141	75,250	75,359	75,469	75,578	75,688	75,797	75,906	76,016
	18	A	70,035											
		B	76,125											

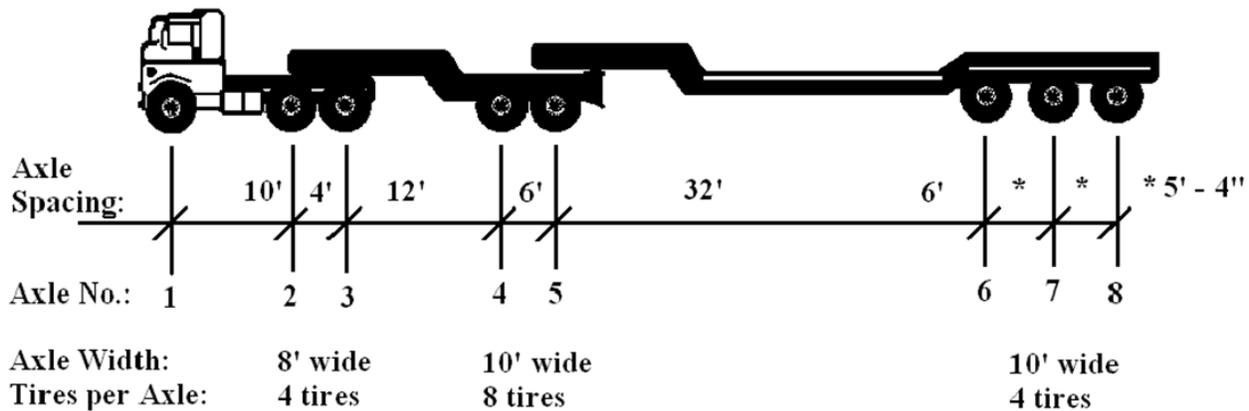
Computation Formula: $Weight = 1.5 \times 700 (L + 40)$
(L = Distance between the center of the front axle and the center of the rear axle of a given group.)

Legend:
Line A: Four tires per axle or two 14-inch wide tires. Value is the formula weight plus 15%.
Line B: Eight tires per axle or four 14-inch wide tires. Value is the formula weight plus 25%.

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Illustration 3. Overweight Axle Groups



The axle group weights shown on the previous tables are maximum weights allowed on any combination of axles within the distance between the front and rear axle of a given group to a maximum of 18 feet. The values in Table 3.01 line "A" are an expansion of the formula $W = 1.5 \times 700 (L + 40)$, where L is the distance between the centers of the front and rear axles of a group. The values in line "B" and in the remaining tables are computed by applying the percentages provided in the Table footnotes and are intended to increase the allowable weights based on wider axles and increased number of tires. Measured axle widths shall be rounded down to the nearest 3" increment when determining the appropriate table to use.

- (Axle 1) limited to 28,000 lbs for single alone
- (Axle 2 + 3); L = 4'; W = 46,200 lbs for tandem alone
- (Axle 1) + (Axle 2 + 3); L = 14'; W = 56,700 lbs for the group
- (Axle 4 + 5); L = 6'; W = 60,375 lbs (25% increase for 10' wide - 8 tires)
- (Axle 2 + 3 + 4); L = 16'; W = $(2/3 \times 58,800) + (1/3 \times 73,500) = 63,700$ lbs
- (Axle 3 + 4 + 5); L = 18'; W = $(1/3 \times 60,900) + (2/3 \times 76,125) = 71,050$ lbs
- (Axle 3 + 4); L = 12'; W = $(1/2 \times 54,600) + (1/2 \times 68,250) = 61,425$ lbs
- (Axle 6 + 7 + 8); L = 10' 8"; W = 61,180 (15% increase for 10' wide - 4 tires)

Note: The Department shall review each possible axle group that can exist within an 18-foot distance. Axle group configurations of different widths or numbers of tires shall be prorated within the total group load in determining any allowable increase over the basic formula weight.

Historical Note

New Illustration 3 made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Illustration 3 amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-412. Highway-specific Restrictions, Requirements, Conditions, and Allowances

- A. The Department may temporarily prohibit operation of an oversize or overweight special permitted vehicle, or impose additional weight restrictions, requirements, conditions, or allowances, if safe transport on a highway under the Department's jurisdiction is unavoidably affected by a temporary construction or maintenance project, incident, or emergency situation as indicated on the Department's web site at www.az511.gov.
- B. The Department shall post to its web site at www.azdot.gov all updates to any temporary or permanent highway restrictions, requirements, conditions, or allowances affecting a route listed under Table 4 as appropriate for safe transport of an oversize or overweight vehicle or vehicle and load.
- C. A permittee and driver shall check the Department's web site at www.azdot.gov daily for updates to any temporary or permanent highway restrictions, requirements, conditions, or allowances affecting safe transport of an oversize or overweight vehicle or vehicle and load on a route listed under Table 4.
- D. A permittee or driver of an oversize or overweight vehicle or load shall not access a route listed under Table 4 unless operating in full compliance with all indicated permanent highway restrictions, requirements, conditions and allowances, including any additional instructions indicated on the special permit

issued by the Department.

- E. A permittee and driver shall additionally check daily for up-to-date information on traffic conditions, road closures, and restrictions by:
 1. Accessing the Department's Traffic Operations Center online at www.az511.gov; or
 2. Contacting a highway project engineer at the ADOT district office identified on the Department's web site at www.azdot.gov/Highways as responsible for oversight of the permittee's applicable transport route.
- F. The information contained in Table 4 reflects highway restrictions, requirements, conditions, and allowances applicable on the effective date of this Section. Real-time updates published as an addendum to Table 4 are posted by the Department to its web site at www.azdot.gov, the Arizona Central Commercial Permits office, and Class C Maintenance Permit Services. This information is critical for ensuring safe transport of an oversize or overweight vehicle or load and is subject to change as provided under this Section.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

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Table 4. Permanent Highway Restrictions, Requirements, Conditions, and Allowances

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
Interstate 8	MP 0.00 (California State Line) to MP 144.55 (Vekol Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 8	MP 144.55 (Vekol Road Underpass - Structure 550)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 8	MP 144.55 (Vekol Road TI) to MP 151.70 (SR 84 TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 8	MP 151.70 Eastbound (SR 84 TI Underpass - Structure 1063)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 8	MP 151.70 (SR 84 TI) to MP 162.50 (Murphy Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 8	MP 162.50 Westbound (Murphy Road Underpass - Structure 1091)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 8	MP 162.50 (Murphy Road) to MP 172.55 (Thornton Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 8	MP 172.55 Eastbound (Thornton Road Underpass - Structure 1196)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = R	
Interstate 8	MP 172.55 Westbound (Thornton Road Underpass - Structure 1196)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 7"		Over 14' - 16' = R	
Interstate 8	MP 172.55 (Thornton Road) to MP 173.53 (Chuichu Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 8	MP 173.53 Eastbound (Chuichu Road Underpass - Structure 1197)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 8	MP 173.53 (Chuichu Road) to MP 178.70 (Junction I-10)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 0.00 (California State Line) to MP 5.84 (Tom Wells Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 5.84 Eastbound (Tom Wells Road Underpass - Structure 767)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 10	MP 5.84 (Tom Wells Road TI) to MP 17.50 (West Quartzsite TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 17.50 (West Quartzsite Underpass - Structure 826)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = R	
Interstate 10	MP 17.50 (West Quartzsite TI) to MP 26.65 (Gold Nugget Mountain)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 26.65 Westbound (Gold Nugget Mountain Underpass - Structure 769)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 10	MP 26.65 (Gold Nugget Mountain) to MP 33.78 (Ramsey Mine TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 33.78 Eastbound (Ramsey Mine Underpass - Structure 1202)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 33.78 (Ramsey Mine TI) to MP 45.34 (Vicksburg Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 45.34 (Vicksburg Road Underpass - Structure 1207)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 7"		Over 14' - 16' = R	
Interstate 10	MP 45.34 (Vicksburg Road TI) to MP 69.60 (Avenue 75E TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 69.60 Westbound (Avenue 75E Underpass - Structure 1283)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 69.60 (Avenue 75E TI) to MP 81.21 (Salome Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 81.21 Eastbound (Salome Road Underpass - Structure 1209)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 81.21 Westbound (Salome Road Underpass - Structure 1209)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 10	MP 81.21 (Salome Road TI) to MP 101.40 (355th Avenue)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
Interstate 10	MP 101.40 Westbound (355th Avenue Underpass - Structure 1647)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = R	
Interstate 10	MP 101.40 (355th Avenue) to MP 133.98 (Junction SR 101)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 133.98 (Junction SR 101) to MP 139.65 (51st Avenue TI)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 139.65 Eastbound (51st Avenue Underpass - Structure 1930)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 139.65 (51st Avenue TI) to MP 145.19 (Deck Park Tunnel)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 145.19 Eastbound (Deck Park Tunnel)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 7"		Over 14' - 16' = R	
Interstate 10	MP 145.19 (Deck Park Tunnel) to MP 147.21 (SR 51 TI)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 147.21 (SR 51 Underpass)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 2"		Over 14' - 16' = R	
Interstate 10	MP 147.21 (SR 51 TI) to MP 161.35 (Junction SR 202, Santan)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 161.35 (Junction SR 202, Santan) to MP 167.47 (Riggs Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 167.47 (Riggs Road Underpass - Structure 1148)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 10	MP 167.47 (Riggs Road TI) to MP 169.85 (Goodyear Underpass)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 169.85 Eastbound (Goodyear Underpass - Structure 1149)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 10	MP 169.85 (Goodyear Underpass) to MP 174.63 (Nelson Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16" = R	
Interstate 10	MP 174.63 (Nelson Road Underpass - Structure 1213)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16" = R	
Interstate 10	MP 174.63 (Nelson Road) to MP 175.81 (Casa Blanca TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16" = R	
Interstate 10	MP 175.81 Eastbound (Casa Blanca TI Underpass - Structure 1214)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16" = R	
Interstate 10	MP 175.81 Westbound (Casa Blanca TI Underpass - Structure 1214)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16" = R	
Interstate 10	MP 175.81 (Casa Blanca TI) to MP 177.76 (Gas Line Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16" = R	
Interstate 10	MP 177.76 Eastbound (Gas Line Road Underpass - Structure 1215)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16" = R	
Interstate 10	MP 177.76 (Gas Line Road TI) to MP 179.39 (Seed Farm Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16" = R	
Interstate 10	MP 179.39 Westbound (Seed Farm Road Underpass - Structure 1216)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16" = R	
Interstate 10	MP 179.39 (Seed Farm Road TI) to MP 195.89 (Earley Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16" = R	
Interstate 10	MP 195.89 (Earley Road Underpass - Structure 1158)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16" = R	
Interstate 10	MP 195.89 (Earley Road) to MP 203.84 (Toltec Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16" = R	
Interstate 10	MP 203.84 Westbound (Toltec Road Underpass - Structure 2152)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16" = R	
Interstate 10	MP 203.84 (Toltec Road TI) to MP 205.45 (Battaglia Underpass)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16" = R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
Interstate 10	MP 205.45 (Battaglia Underpass - Structure 943)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 10	MP 205.45 (Battaglia Underpass) to MP 208.79 (Sunshine Blvd TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 208.79 Westbound (Sunshine Blvd Underpass - Structure 945)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 208.79 (Sunshine Blvd TI) to MP 226.45 (Red Rock Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 226.45 Eastbound (Red Rock Road Underpass - Structure 592)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 226.45 Westbound (Red Rock Road Underpass - Structure 592)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 10	MP 226.45 (Red Rock Road TI) to MP 236.42 (Marana Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 236.42 (Marana Road) to MP 270.57 (Kolb Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 270.57 Eastbound (Kolb Road Underpass - Structure 1823)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 270.57 (Kolb Road TI) to MP 273.14 (Rita Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 273.14 Eastbound (Rita Road Underpass - Structure 711)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 273.14 (Rita Road TI) to MP 275.49 (Houghton Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 275.49 Westbound (Houghton Road Underpass - Structure 713)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 10	MP 275.49 (Houghton Road TI) to MP 279.37 (Vail/Wentworth TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 279.37 Eastbound (Vail/Wentworth Underpass - Structure 744)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 279.37 Westbound (Vail/Wentworth Underpass - Structure 745)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 10	MP 279.37 (Vail/Wentworth TI) to MP 339.46 (Airport Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 339.46 Eastbound (Airport Road Underpass - Structure 1114)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = R	
Interstate 10	MP 339.46 (Airport Road) to MP 378.93 (West San Simon TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 378.93 Eastbound (West San Simon Underpass - Structure 1164)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 10	MP 378.93 Westbound (West San Simon Underpass - Structure 1164)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 10	MP 378.93 (West San Simon TI) to MP 382.35 (East San Simon TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 10	MP 382.35 Eastbound (East San Simon Underpass - Structure 1169)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 10	MP 382.35 (East San Simon TI) to MP 391.23 (New Mexico State Line)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 15	MP 0.00 (Nevada State Line) to MP 15.38 (Virgin River Bridge # 5)	R17-6-405; R17-6-406; R17-6-408; R17-6-409		Over 100' unarticulated = F/R + 2 LE	Over 14' - 16' = F/R + 2 LE	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
Interstate 15	MP 15.38 Northbound (Virgin River Bridge #5 - Structure 1617)	R17-6-405; R17-6-406; R17-6-408; R17-6-409		Over 100' unarticulated = F/R + 2 LE	Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 150,000 or less - no additional restrictions; 150,001 through 250,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permitted vehicles with a gross weight of over 250,000 require special analysis and approval from the ADOT Bridge Group.
Interstate 15	MP 15.38 Southbound (Virgin River Bridge #5 - Structure 1618)	R17-6-405; R17-6-406; R17-6-408; R17-6-409		Over 100' unarticulated = F/R + 2 LE	Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 150,000 or less - no additional restrictions; 150,001 through 250,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permitted vehicles with a gross weight of over 250,000 require special analysis and approval from the ADOT Bridge Group.
Interstate 15	MP 15.38 (Virgin River Bridge #5) to MP 29.40 (Utah State Line)	R17-6-405; R17-6-406; R17-6-408; R17-6-409		Over 100' unarticulated = F/R + 2 LE	Over 14' - 16' = F/R + 2 LE	
Interstate 17	MP 193.94 (Beginning of route at Junction I-10) to MP 198.84 (Buckeye Road)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 198.84 (Buckeye Road Underpass - Structure 607)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 5"		Over 14' - 16' = R	
Interstate 17	MP 198.84 (Buckeye Road) to MP 199.15 (Grant Street)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 199.15 (Grant Street Underpass - Structure 555)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 6"		Over 14' - 16' = R	
Interstate 17	MP 199.15 (Grant Street) to MP 199.35 (Railroad Underpass)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 199.35 Northbound (Railroad Underpass - Structure 600)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = R	
Interstate 17	MP 199.35 Southbound (Railroad Underpass - Structure 600)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 7"		Over 14' - 16' = R	
Interstate 17	MP 199.35 (Railroad Underpass) to MP 199.56 (Jefferson Street)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 199.56 Northbound (Jefferson Street Underpass - Structure 554)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = R	
Interstate 17	MP 199.56 Southbound (Jefferson Street Underpass - Structure 554)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 7"		Over 14' - 16' = R	
Interstate 17	MP 199.56 (Jefferson Street) to MP 214.74 (Utopia Road Ramp C)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 214.74 Northbound (Utopia Road Ramp C - Structure 2138)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 17	MP 214.74 (Utopia Road Ramp C) to MP 214.96 (Junction SR 101)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 214.96 (Junction SR 101) to MP 223.99 (Junction SR 74)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
Interstate 17	MP 224.00 Southbound (Carefree Highway Underpass - Structure 2845)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 224.00 (Carefree Highway TI) to MP 229.07 (Anthem Road)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 229.07 (Anthem Road) to MP 235.94 (Table Mesa TI)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
Interstate 17	MP 235.94 Southbound (Table Mesa Underpass - Structure 1294)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = F/R	
Interstate 17	MP 235.94 (Table Mesa TI) to MP 242.15 (Rock Spring)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
Interstate 17	MP 242.15 (Rock Spring Underpass - Structures 969 & 970)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 17	MP 242.15 (Rock Spring TI) to MP 289.97 (Middle Verde TI)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 289.97 Southbound (Middle Verde Underpass - Structure 1733)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 17	MP 289.97 (Middle Verde TI) to MP 293.26 (Cornville/McGuireville TI)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 17	MP 293.26 Southbound (Cornville/McGuireville Underpass - Structure 652)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409	14' 8"		Over 14' - 16' = R	
Interstate 17	MP 293.26 (Cornville/McGuireville TI) to MP 340.05 (End of route at Junction I-40)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 19	MP 0.00 (US/Mexico Border) to MP 13.96 (Peck Canyon TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 19	MP 13.96 Northbound (Peck Canyon Underpass - Structure 935)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 19	MP 13.96 (Peck Canyon TI) to MP 26.54 (Agua Linda TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 19	MP 26.54 Northbound (Agua Linda Underpass - Structure 1739)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 19	MP 26.54 (Agua Linda TI) to MP 59.09 (Valencia Road, Kilometer Post 95.00)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 19	MP 59.09 (Valencia Road, Kilometer Post 95.00) to MP 60.95 (Irvington TI)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 19	MP 60.95 Southbound (Irvington Underpass - Structure 1123)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 19	MP 60.95 (Irvington TI) to MP 61.90 (Ajo Way)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 19	MP 61.90 Southbound (Ajo Way Underpass - Structure 1125)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 19	MP 61.90 (Ajo Way) to MP 63.09 (Junction I-10)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 0.00 (California State Line) to MP 3.01 Westbound (Needle Mountain TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 3.01 Westbound (Needle Mountain Underpass - Structure 1756)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 40	MP 3.01 Westbound (Needle Mountain TI) to MP 26.17 (East Yucca TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 26.17 Eastbound (East Yucca Underpass - Structure 923)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 26.17 (East Yucca TI) to MP 37.03 (Griffith Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
Interstate 40	MP 37.03 Eastbound (Griffith Road Underpass - Structure 928)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 37.03 (Griffith Road TI) to MP 87.57 (Willow Ranch Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 87.57 Westbound (Willow Ranch Road Underpass - Structure 1770)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 7"		Over 14' - 16' = R	
Interstate 40	MP 87.57 (Willow Ranch Road TI) to MP 117.87 (Canyon Mouth Dam)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 117.87 Eastbound (Canyon Mouth Dam Underpass - Structure 1256)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 40	MP 117.87 (Canyon Mouth Dam) to MP 121.07 (West Seligman TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 121.07 Eastbound (West Seligman Underpass - Structure 1258)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 121.07 (West Seligman TI) to MP 139.88 (Crookton Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 139.88 Westbound (Crookton Road Underpass - Structure 1177)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 40	MP 139.88 (Crookton Road TI) to MP 167.52 (Garland Prairie TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 167.52 (Garland Prairie Underpass - Structure 739)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 40	MP 167.52 (Garland Prairie TI) to MP 178.24 (Parks Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 178.24 Eastbound (Parks Road Underpass - Structure 743)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 178.24 (Parks Road TI) to MP 201.10 (Country Club Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 201.10 Westbound (Country Club Road Underpass - Structure 1926)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 40	MP 201.10 (Country Club Road TI) to MP 204.87 (Walnut Canyon TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 204.87 Eastbound (Walnut Canyon Underpass - Structure 1270)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 40	MP 204.87 Westbound (Walnut Canyon Underpass - Structure 1271)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 40	MP 204.87 (Walnut Canyon TI) to MP 207.24 (Cosnino Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 207.24 Westbound (Cosnino Road Underpass - Structure 1361)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 6"		Over 14' - 16' = R	
Interstate 40	MP 207.24 (Cosnino Road) to MP 211.16 (Winona TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 211.16 Westbound (Winona Underpass - Structure 1084)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 40	MP 211.16 (Winona TI) to MP 280.64 (Hunt Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 280.64 Westbound (Hunt Road Underpass - Structure 930)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 40	MP 280.64 (Hunt Road TI) to MP 294.55 Eastbound (Sun Valley Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	294.55 Eastbound (Sun Valley Road Underpass - Structure 931)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 294.55 Eastbound (Sun Valley Road TI) to MP 320.00 (Pinta TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 320.00 Westbound (Pinta Underpass - Structure 708)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
Interstate 40	MP 320.00 (Pinta TI) to MP 325.92 (Navajo TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 325.92 Eastbound (Navajo Underpass - Structure 709)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 40	MP 325.92 Westbound (Navajo Underpass - Structure 709)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 40	MP 325.92 (Navajo TI) to MP 330.00 (Mc Carroll Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 330.00 (Mc Carroll Road Underpass - Structure 710)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 330.00 (Mc Carroll Road TI) to MP 333.41 (Chambers TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 333.41 Westbound (Chambers Underpass - Structure 814)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
Interstate 40	MP 333.41 (Chambers TI) to MP 339.46 (Sanders TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 339.46 Westbound (Sanders Underpass - Structure 815)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 339.46 (Sanders TI) to MP 341.81 (Ortega Road TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 341.81 Westbound (Ortega Road Underpass - Structure 816)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 341.81 (Ortega Road TI) to MP 343.83 (Querino TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 343.83 Eastbound (Querino Underpass - Structure 951)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
Interstate 40	MP 343.83 (Querino TI) to MP 348.16 (Houck TI)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40	MP 348.16 Eastbound (Houck Underpass - Structure 955)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
Interstate 40	MP 348.16 (Houck TI) to MP 359.63 (New Mexico State Line)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
Interstate 40 (Frontage Road)	MP 300.75 - (Little Lithodendron Bridge - South Frontage Road - Structure 2057)	R17-6-406; R17-6-408			Over 14' - 16' = R	20,000
State Business 8	MP 0.00 (California State Line) to MP 11.50 (End of route, near I-8 east of Yuma)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Business 8	MP 117.32 (Gila Bend) to MP 122.98 (Junction I-8)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 303.47 (West Benson) to MP 303.86 (I-10 West Benson TI)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 303.86 Westbound (I-10 Underpass - Structures 1346 & 1347)	R17-6-406; R17-6-408	15' 1'		Over 14' - 16' = F/R	
State Business 10	MP 303.86 (I-10 West Benson TI) to MP 305.79 (SR 80 Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 305.79 Eastbound (SR 80 Underpass - Structure 262)	R17-6-406; R17-6-408	14'		Over 14' - 16' = F/R	
State Business 10	MP 305.79 Westbound (SR 80 Underpass - Structure 262)	R17-6-406; R17-6-408	14' 2"		Over 14' - 16' = F/R	
State Business 10	MP 305.79 (SR 80 Underpass) to MP 305.85 (Railroad Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 305.85 Eastbound (Railroad Underpass - Structure 264)	R17-6-406; R17-6-408	14'		Over 14' - 16' = F/R	
State Business 10	MP 305.85 Westbound (Railroad Underpass - Structure 264)	R17-6-406; R17-6-408	14' 2"		Over 14' - 16' = F/R	
State Business 10	MP 305.85 (Railroad Underpass) to MP 306.45 (San Pedro River Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	

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Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Business 10	MP 306.45 (San Pedro River Bridge - Structure 350)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
State Business 10	MP 306.45 (San Pedro River Bridge) to MP 306.98 (End SB 10 at I-10 Exit #306)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 336.39 (Begin SB 10 at Exit #336) to MP 340.09 (Junction SR 186)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 340.09 (Junction SR 186) to MP 344.66 (End SB 10 at I-10 Exit #344)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 362.48 (West Bowie) to MP 366.88 (End SB 10 at I-10 Exit #366)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 10	MP 378.69 (West Simon) to MP 382.50 (End SB 10 at I-10 Exit #382)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 19	MP 0.00 (US/Mexico Border) to MP 1.53 (Junction SR 82)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 19	MP 1.53 (Junction SR 82) to MP 1.66 (Railroad Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 19	MP 1.66 (Railroad Underpass - Structure 980)	R17-6-406; R17-6-408	15' 3"		Over 14' - 16' = F/R	
State Business 19	MP 1.66 (Railroad Underpass) to MP 5.88 (End SB 19 at I-19)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 138.81 (West Seligman) to MP 142.20 (I-40 Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 142.20 (I-40 Underpass - Structure 1007)	R17-6-406; R17-6-408	15' 4"		Over 14' - 16' = F/R	
State Business 40	MP 142.20 (I-40 Underpass) to MP 142.21 (Railroad Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 142.21 (Railroad Underpass - Structure 1273)	R17-6-406; R17-6-408	15' 3"		Over 14' - 16' = F/R	
State Business 40	MP 142.21 (Railroad Underpass) to MP 143.04 (End SB 40 at I-40 Exit #123)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 144.82 (West Ash Fork) to MP 146.33 (East Ash Fork)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 146.33 (East Ash Fork) to MP 165.28 (Railroad Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 165.28 (Railroad Underpass - Structure 1575)	R17-6-406; R17-6-408	14' 7"		Over 14' - 16' = F/R	
State Business 40	MP 165.28 (Railroad Underpass) to MP 191.44 (Junction I-40)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 191.44 (Junction I-40) to MP 191.69 (I-40 Underpass)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	Coconino County Jurisdiction
State Business 40	MP 191.69 Northbound (I-40 East Underpass - Structure 1129)	R17-6-406; R17-6-408	15'		Over 12' - 16' = F/R	Coconino County Jurisdiction
State Business 40	MP 191.69 Southbound (I-40 East Underpass - Structure 1129)	R17-6-406; R17-6-408	14' 3"		Over 12' - 16' = F/R	Coconino County Jurisdiction
State Business 40	MP 191.69 Northbound (I-40 West Underpass - Structure 1128)	R17-6-406; R17-6-408	14' 3"		Over 12' - 16' = F/R	Coconino County Jurisdiction

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Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Business 40	MP 191.69 Southbound (I-40 West Underpass - Structure 1128)	R17-6-406; R17-6-408	15' 8"		Over 12' - 16' = F/R	Coconino County Jurisdiction
State Business 40	MP 191.69 (I-40 Underpass) to MP 195.96 (Railroad Underpass)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	Coconino County Jurisdiction: MP 191.69 to MP 193.16
State Business 40	MP 195.96 (Railroad Underpass - Structure 529)	R17-6-406; R17-6-408	13' 9"		Over 12' - 16' = F/R	
State Business 40	MP 195.96 (Railroad Underpass) to MP 196.14 (Junction US 180)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Business 40	MP 196.14 (Junction US 180) to MP 200.32 (Junction US 89)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	City of Flagstaff Jurisdiction: MP 199.91 to MP 200.32
State Business 40	MP 200.32 (Junction US 89) to MP 200.99 (Junction I-40)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	City of Flagstaff Jurisdiction
State Business 40	MP 274.48 (West Joseph City) to MP 277.33 (East Joseph City)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 285.00 (West Holbrook) to MP 286.68 (Junction SR 77)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 286.68 (Junction SR 77) to MP 287.39 (Holbrook Middle I-40 Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	287.39 (Holbrook Middle I-40 Underpass) to MP 289.80	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Business 40	MP 289.80 (East Holbrook, I-40 Underpass - Structure 1369)	R17-6-406; R17-6-408	14' 8"		Over 14' - 16' = F/R	
State Business 79	MP 132.17 (Junction SR 79) to MP 134.03 (Junction SR 79)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 51	MP 0.00 (Junctions I-10 and SR Loop 202) to MP 13.62 (Bell Road)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
State Route 51	MP 13.62 Northbound (Bell Road Underpass - Structure 2477)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 7"		Over 14' - 16' = R	
State Route 51	MP 13.62 Southbound (Bell Road Underpass - Structure 2477)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	14' 10"		Over 14' - 16' = R	
State Route 51	MP 13.62 (Bell Road) to MP 15.90 (Junction SR Loop 101)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
State Route 61	MP 352.88 (Junction US 60) to MP 381.86 (Junction US 180)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 61	MP 416.49 (Junction US 191) to MP 430.26 (New Mexico State Line)	R17-6-406; R17-6-408			Over 10' - 16' = F/R	
State Route 64	MP 185.46 (Junction I-40 in Williams) to MP 237.10 (Grand Canyon National Park)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 64	MP 267.10 (Grand Canyon National Park) to MP 295.83 (Junction US 89)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 66	MP 56.70 (Junction I-40) to MP 123.10 (Route end)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 67	MP 579.36 (Junction US 89A) to MP 610.26 (North Rim)	R17-6-406; R17-6-408; Seasonal Road Closure			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	20,000
State Route 68	MP 1.10 (Junction SR 95) to MP 27.10 (Junction US 93)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 69	MP 262.20 (Junction I-17) to MP 296.00 (Junction SR 89)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 71	MP 86.10 (Junction US 60) to MP 102.90 (SR 71 Overpass)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 71	MP 102.90 (SR 71 Overpass - Structure 842)	R17-6-406; R17-6-408	14' 10"		Over 12' - 16' = F/R	
State Route 71	MP 102.90 (SR 71 Overpass) to MP 109.70 (Junction SR 89)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 72	MP 13.10 (Junction SR 95) to MP 49.60 (Junction US 60)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 73	MP 310.40 (Junction US 60) to MP 334.72 (White River)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 73	MP 334.72 (White River) to MP 357.72 (Junction SR 260)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 74	MP 0.00 (Junction US 60) to MP 30.84 (Junction I-17)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 75	MP 378.92 (Junction US 70) to MP 398.43 (Junction US 191)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 77	MP 68.05 (Junction I-10 in Tucson) to MP 74.84 (Ina Road)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 77	MP 74.84 (Ina Road) to MP 79.48 (Tangerine Road)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 77	MP 79.48 (Tangerine Road) to MP 91.13 (Junction SR 79)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 77	MP 91.13 (Junction SR 79) to MP 113.60 (Mammoth)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 77	MP 113.60 (Mammoth) to MP 134.80 (Junction SR 177)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 77	MP 134.80 (Junction SR 177) to MP 170.90 (Junction US 70)	R17-6-406; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 77	MP 342.20 (Junction US 60, Show Low) to MP 361.05 (Junction SR 277)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 77	MP 361.05 (Junction SR 277) to MP 386.20 (Junction SR 377)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 77	MP 386.20 (Junction SR 377) to MP 387.81 (Junction US 180)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 77	MP 387.81 (Junction US 180) to MP 388.67 (Junction SB 40, Holbrook)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 77	MP 395.05 (I-40 east of Holbrook) to MP 408.93 (End of State Route at Navajo Nation boundary)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 78	MP 154.55 (Junctions SR 75 and US 191) to MP 174.73 (New Mexico State Line)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 79	MP 91.14 (Junction SR 77) to MP 132.17 (Junction SB 79)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 79	MP 134.03 (Junction SB 79) to MP 150.28 (Junction US 60)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 80	MP 293.27 (Junction SB 10 in Benson) to MP 339.06 (Mule Pass Tunnel)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 80	MP 339.06 (Mule Pass Tunnel - Structure 538)	R17-6-406; R17-6-408	14'		Over 14' - 16' = F/R	
State Route 80	MP 339.06 (Mule Pass Tunnel) to MP 343.01 (Lowell Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 80	MP 343.01 (Lowell Underpass - Structure 269)	R17-6-406; R17-6-408	14' 7"		Over 14' - 16' = F/R	
State Route 80	MP 343.01 (Lowell Underpass) to MP 348.15 (Mulepass-Lowell Arch)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 80	MP 348.15 (Mulepass-Lowell Arch - Structure 130)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	Legal weight as provided under R17-6-102, Table 1.
State Route 80	MP 348.15 (Mulepass-Lowell Arch) to MP 352.38 (Glance Creek Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 80	MP 352.38 (Glance Creek Bridge - Structure 237)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	Legal weight as provided under R17-6-102, Table 1.
State Route 80	MP 352.38 (Glance Creek Bridge) to MP 364.66 (Douglas)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 80	MP 364.66 (Douglas) to MP 366.12 (Junction US 191)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 80	MP 366.12 (Junction US 191) to MP 415.39 (New Mexico State Line)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 82	MP 0.00 (Junction SB 19) to MP 32.36 (Junction SR 83)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 3 LE	
State Route 82	MP 32.36 (Junction SR 83) to MP 51.59 (Junction SR 90)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 3 LE	
State Route 82	MP 51.59 (Junction SR 90) to MP 67.57 (Junction SR 80)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 83	MP 3.19 (Parker Canyon Lake) to MP 31.63 (Junction SR 82)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 83	MP 31.63 (Junction SR 82) to MP 58.00 (Junction I-10)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 84	MP 155.13 (Junction I-8) to MP 177.60 (Railroad Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 84	MP 177.66 Eastbound (Railroad Underpass - Structure 143)	R17-6-406; R17-6-408	13' 3"		Over 14' - 16' = F/R	
State Route 84	MP 177.66 Westbound (Railroad Underpass - Structure 1062)	R17-6-406; R17-6-408	14'		Over 14' - 16' = F/R	
State Route 84	MP 177.60 (Railroad Underpass) to MP 177.97 (Junctions SR 387 and SR 287)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 85	MP 0.00 (Junction SB 8) to MP 0.35 (I-8 Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 0.35 (I-8 Underpass - Structure 702)	R17-6-406; R17-6-408	14' 5"		Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 0.35 (I-8 Underpass) to MP 0.37 (Railroad Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 0.37 (Railroad Underpass - Structure 734)	R17-6-406; R17-6-408	14' 5"		Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 0.37 (Railroad Underpass) to MP 0.60 (I-8 Overpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 0.60 (I-8 Overpass WB/EB - Structures 1557 & 1558)	R17-6-406; R17-6-408	14' 11"		Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 0.60 (I-8 Overpass) to MP 39.70 (Ajo)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 39.70 (Ajo) to MP 80.69 (US/Mexico Border)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 85	MP 120.31 (Junction SB 8) to MP 154.48 (Junction I-10)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 86	MP 53.00 (Junction SR 85) to MP 150.42 (Junction SR 286)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 86	MP 150.42 (Junction SR 286) to MP 164.04 (Camino Verde Road)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 86	MP 164.04 (Camino Verde Road) to MP 171.44 (Junction I-19)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 87	MP 115.20 (Junction I-10) to MP 115.20 (I-10 Overpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 87	MP 115.20 Northbound (I-10 Overpass)	R17-6-406; R17-6-408	15' 3"		Over 14' - 16' = F/R	
State Route 87	MP 115.20 Southbound (I-10 Overpass)	R17-6-406; R17-6-408	15' 2"		Over 14' - 16' = F/R	
State Route 87	MP 115.20 (Junction I-10) to MP 162.67 (Junction Ocotillo Road in Chandler)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 87	MP 172.22 (Junction US 60) to MP 176.74 (Junction SR 202 Overpass)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 87	MP 176.74 (Junction SR 202 Overpass)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = F/R	
State Route 87	MP 176.74 (Junction SR 202 Overpass) to MP 252.50 (Junction SR 260, Payson)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 87	MP 252.50 (Junction SR 260, Payson) to MP 278.80 (Junction SR 260)	R17-6-406; R17-6-407; R17-6-408		40'+ requires F/R + 2 LE	Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 87	MP 278.80 (Junction SR 260) to MP 340.94 (Junction SR 99)	R17-6-406; R17-6-407; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 3 LE	
State Route 87	MP 340.94 (Junction SR 99) to MP 342.10 (Railroad Underpass, Winslow)	R17-6-406; R17-6-407; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 3 LE	
State Route 87	MP 342.10 (Railroad Underpass, Winslow - Structure 194)	R17-6-406; R17-6-407; R17-6-408	14' 6"		Over 12' - 14' = F/R Over 14' - 16' = F/R + 3 LE	
State Route 87	MP 342.10 (Railroad Underpass, Winslow) to MP 342.23 (Junction SB 40)	R17-6-406; R17-6-407; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 3 LE	
State Route 87	MP 343.56 (SB 40 in Winslow) to MP 406.04 (Junction SR 264)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 88	MP 193.85 (Junction US 60) to MP 202.84 (Apache Trail Marker)	R17-6-406; R17-6-408			Over 8' requires class C permit	
State Route 88	MP 202.84 (Apache Trail Marker) to MP 209.62 (First Water Creek Bridge)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 88	MP 209.62 (First Water Creek Bridge - Structure 26)	R17-6-406; R17-6-408	14' 3"	Over 40' requires class C permit	Over 8' requires class C permit	Legal weight as provided under R17-6-102, Table 1.
State Route 88	MP 209.62 (First Water Creek Bridge) to MP 211.05 (Boulder Canyon Bridge)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 88	MP 211.05 (Boulder Canyon Bridge - Structure 193)	R17-6-406; R17-6-408	14' 3"	Over 40' requires class C permit	Over 8' requires class C permit	Legal weight as provided under R17-6-102, Table 1.
State Route 88	MP 211.05 (Boulder Canyon Bridge) to MP 220.20 (End of pavement)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 88	MP 220.20 (End of pavement) to MP 222.00 (Fish Creek Hill)	R17-6-406; R17-6-408		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 222.00 (Fish Creek Hill) to MP 223.50 (Fish Creek Bridge)	R17-6-406; R17-6-408; One lane road		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 223.50 (Fish Creek Bridge - Structure 27)	R17-6-406; R17-6-408; One lane bridge		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 223.50 (Fish Creek Bridge) to MP 224.40 (End of one lane road)	R17-6-406; R17-6-408		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 224.40 (End of one lane road) to MP 224.60 (Lewis Pranty Creek Bridge)	R17-6-406; R17-6-408		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 224.60 (Lewis Pranty Creek Bridge - Structure 28)	R17-6-406; R17-6-408		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 224.60 (Lewis Pranty Creek Bridge) to MP 225.55 (Dry Wash Bridge)	R17-6-406; R17-6-408		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 225.55 (Dry Wash Bridge - Structure 15)	R17-6-406; R17-6-408		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 225.55 (Dry Wash Bridge) to MP 226.60 (ADOT Maintenance Yard)	R17-6-406; R17-6-408		No trucks over 40'	Over 8' requires class C permit	Over 20,000 requires class C permit
State Route 88	MP 226.60 (ADOT Maintenance Yard) to MP 233.50 (Pine Creek Bridge)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 88	MP 233.50 (Pine Creek Bridge - Structure 31)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	Legal weight as provided under R17-6-102, Table 1.
State Route 88	MP 233.50 (Pine Creek Bridge) to MP 240.57 (Begin Pavement)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 88	MP 240.57 (Begin Pavement) to MP 242.40 (Junction SR 188)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 89	MP 258.20 (Junction US 93) to MP 295.00 (Wilhoit)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 89	MP 295.00 (Wilhoit) to MP 309.00 (Prescott City Limits)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 89	MP 309.00 (Prescott City Limits) to MP 309.45 (Granite Creek Bridge #2)	R17-6-406; R17-6-408			Over 12' - 16' = F/R + 2 LE	
State Route 89	MP 309.45 (Granite Creek Bridge #2 - Structure 106)	R17-6-406; R17-6-408			Over 12' - 16' = F/R + 2 LE	Legal weight as provided under R17-6-102, Table 1.
State Route 89	MP 309.45 (Granite Creek Bridge #2) to MP 320.00 (Willow Creek Road)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	City of Prescott Jurisdiction: MP 310.26 to MP 319.00 & MP 312.57 to MP 312.95
State Route 89	MP 320.00 (Willow Creek Road) to MP 345.70 (Hell Canyon Bridge)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 89	MP 345.70 (Hell Canyon Bridge - Structure 483)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	Legal weight as provided under R17-6-102, Table 1.
State Route 89	345.70 (Hell Canyon Bridge) to MP 363.00 (Junction I-40)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 89A	MP 317.80 (Junction SR 89) to MP 331.00 (Old Fain Road)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 89A	MP 331.00 (Old Fain Road) to MP 348.00 (Clarkdale)	R17-6-406; R17-6-408		Over 50' requires class C permit	Over 8' requires class C permit	
State Route 89A	MP 348.00 (Clarkdale) to MP 355.21 (Junction SR 260)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 89A	MP 355.21 (Junction SR 260) to MP 374.14 (Junction SR 179)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 89A	MP 374.14 (Junction SR 179) to MP 375.66 (Midgley/Wilson Canyon Bridge)	R17-6-406; R17-6-408		Over 50' requires class C permit	Over 10' - 12' = F/R Over 12' - 16' = F/R + 2 LE	
State Route 89A	MP 375.66 (Midgley/Wilson Canyon Bridge - Structure 232)	R17-6-406; R17-6-408		Over 50' requires class C permit	Over 10' - 12' = F/R Over 12' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
State Route 89A	MP 375.66 (Midgley/Wilson Canyon Bridge) to MP 398.96 (JW Powell Boulevard/I-17)	R17-6-406; R17-6-408		Over 50' requires class C permit	Over 10' - 12' = F/R Over 12' - 16' = F/R + 2 LE	
State Route 89A Spur	MP 324.47 (Junction SR 89A) to MP 331.63 (Junction SR 69)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 90	MP 289.59 (Junction I-10) to MP 336.40 (Junction SR 80)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 92	MP 321.00 (Junction SR 90) to MP 340.56 (San Pedro River bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 92	MP 340.56 (San Pedro River bridge - Structure 449)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
State Route 92	MP 340.56 (San Pedro River bridge) to MP 355.00 (Junction SR 80)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 95	MP 109.04 (at SB 10 in Quartz-site) to MP 131.68 (Junction SR 72)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 95	MP 131.68 (Junction SR 72) to MP 143.93 (Junction SR 95 Spur)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 95	MP 143.93 (Junction SR 95 Spur) to MP 144.75 (Airport Road in Parker)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 95	MP 144.75 (Airport Road in Parker) to MP 187.51 (Chenowith Drive in Lake Havasu City)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 95	MP 187.51 (Chenowith Drive in Lake Havasu City) to MP 202.06 (Junction I-40)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 95	MP 226.08 (California State Line near Needles) to MP 227.32 (Courtwright Road)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 95	MP 227.32 (Courtwright Road) to MP 249.80 (Junction SR 68)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 96	MP 0.00 (Bagdad) to MP 4.01 (Junction SR 97)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 96	MP 4.01 (Junction SR 97) to MP 10.80 (Santa Maria River Bridge)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 96	MP 10.80 (Santa Maria River Bridge - Structure 225)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
State Route 96	MP 10.80 (Santa Maria River Bridge) to MP 21.92 (Town of Hillside)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 97	MP 155.52 (Junction US 93) to MP 166.97 (Junction SR 96)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 98	MP 294.67 (Junction US 89) to MP 361.39 (Electrical wire near Junction US 160)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 98	MP 361.39 (Electrical wire near Junction US 160)	R17-6-406; R17-6-408	16' 6"		Over 14' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 98	MP 361.39 (Electrical wire near Junction US 160) to MP 361.56 (Junction US 160)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 99	MP 27.5 (Beginning of route south of Winslow) to MP 38.19 (Clear Creek Arch Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 99	MP 38.19 (Clear Creek Arch Bridge - Structure 1038)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	Legal weight as provided under R17-6-102, Table 1.
State Route 99	MP 38.19 (Clear Creek Arch Bridge) to MP 38.90 (Jacks Canyon Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 99	MP 38.90 (Jacks Canyon Bridge - Structure 1036)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	Legal weight as provided under R17-6-102, Table 1.
State Route 99	MP 38.90 (Jacks Canyon Bridge) to MP 42.65 (Junction SR 87)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 99	MP 52.69 (Junction I-40) to MP 72.16 (Route end at BIA 15)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 101	MP 1.21 (Junction I-10, near 99th Avenue) to MP 61.33 (Junction SR 202)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
State Route 143	MP 0.00 (Junction I-10) to MP 3.81 (McDowell Road)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
State Route 169	MP 0.00 (Junction SR 69) to MP 15.10 (Junction I-17)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 177	MP 136.31 (Junction SR 77) to MP 167.64 (Junction US 60)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 179	MP 298.95 (Junction I-17) to MP 298.95 (Sedona Road Overpass)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 179	MP 298.95 (Sedona Road Overpass - Structures 633 & 1061)	R17-6-406; R17-6-408	14' 2"		Over 12' - 16' = F/R	
State Route 179	MP 298.95 (Sedona Road Overpass) to MP 313.44 (Junction SR 89A)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 180A	MP 343.10 (Junction US 180) to MP 353.00 (Junction SR 61)	R17-6-406; R17-6-408			Over 14' requires class C permit	
State Route 181	MP 38.25 (Junction US 191) to MP 61.08 (Junction SR 186)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 181	MP 61.08 (Junction SR 186) to MP 65.04 (Chiricahua National Monument)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 186	MP 326.19 (Junction I-10 in Willcox) to MP 359.42 (Junction SR 181)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 187	MP 186.77 (Junction SR 387) to MP 192.19 (Junction SR 87)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 188	MP 214.92 (Junction US 60) to MP 229.58 (Junction SR 288)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 188	MP 229.58 (Junction SR 288) to MP 244.15 (Junction SR 88)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 188	MP 244.15 (Junction SR 88) to MP 244.28 (Roosevelt Lake Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 188	MP 244.28 (Roosevelt Lake Bridge - Structure 2028)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 150,000 or less - no additional restrictions; 150,001 through 250,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permitted vehicles with a gross weight of over 250,000 require special analysis and approval from the ADOT Bridge Group.

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 188	MP 244.28 (Roosevelt Lake Bridge) to MP 250.00 (Rock Creek)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 188	MP 250.00 (Rock Creek) to MP 260.00 (South of Punkin Center)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 188	MP 260.00 (South of Punkin Center) to MP 276.78 (Junction SR 87)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 189	MP 0.00 (US/Mexico Border) to MP 2.88 (Junction I-19)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 189	MP 2.88 (Junction I-19) to MP 3.75 (Junction SB 19)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 195	MP 2.50 (Begin route at Avenue E 1/2) to MP 24.39 (Junction I-8)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 202	MP 0.00 (Junctions I-10 and SR 51) to MP 9.80 (Junction SR 101)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
State Route 202	MP 9.80 (Junction SR 101) to MP 57.24 (Junction I-10)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
State Route 238	MP 24.00 to MP 44.25 (Junction SR 347)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 260	MP 206.40 (Junction SR 89A) to MP 218.60 (Junction I-17)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 260	MP 218.60 (Junction I-17) to MP 252.00 (Junction SR 87)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 260	MP 252.00 (Junction SR 87 in Payson) to MP 256.00 (Star Valley)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 260	MP 256.00 (Star Valley) to MP 305.67 (Junction SR 277)	R17-6-406; R17-6-407; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 260	MP 305.67 (Junction SR 277) to MP 340.07 (Junction US 60 in Show Low)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 260	MP 341.68 (Junction US 60 in East Show Low) to MP 357.72 (Junction SR 73)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 260	MP 357.72 (Junction SR 73) to MP 368.60 (Junction SR 473, Hawley Lake Road)	R17-6-406; R17-6-408		80'+ requires F/R	Over 12' - 16' = F/R	
State Route 260	MP 368.60 (Junction SR 473, Hawley Lake Road) to MP 377.44 (Junction SR 273)	R17-6-406; R17-6-408		80'+ requires F/R	Over 12' - 16' = F/R	
State Route 260	MP 377.44 (Junction SR 273) to MP 385.56 (Junction SR 373, Greer)	R17-6-406; R17-6-408		80'+ requires F/R	Over 12' - 16' = F/R	
State Route 260	MP 385.56 (Junction SR 373, Greer) to MP 393.01 (Junction SR 261, Big Lake)	R17-6-406; R17-6-408		80'+ requires F/R	Over 12' - 16' = F/R	
State Route 260	MP 393.01 (Junction SR 261, Big Lake) to MP 398.67 (Junction US 180)	R17-6-406; R17-6-408		80'+ requires F/R	Over 12' - 16' = F/R	
State Route 261	MP 394.37 (Junction SR 273) to MP 412.50 (Junction SR 260)	R17-6-406; R17-6-408; Seasonal Road Closure			Over 8' requires class C permit	
State Route 264	MP 321.97 (Junction US 160) to MP 384.23 (Junction SR 87)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 264	MP 384.23 (Junction SR 87) to MP 441.02 (Junction US 191)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 264	MP 441.02 (Junction US 191) to MP 446.87 (Junction US 191)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 264	MP 446.87 (Junction US 191) to MP 476.12 (New Mexico State Line)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
State Route 266	MP 104.60 (Junction US 191) to MP 123.80 (Bonita)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
State Route 273	MP 377.46 (Junction SR 260) to MP 396.83 (Big Lake Turnoff)	R17-6-406; R17-6-408; Seasonal Road Closure			Over 14' - 16' = F/R	
State Route 277	MP 305.67 (Junction SR 260) to MP 312.62 (Junction SR 377)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 277	MP 312.62 (Junction SR 377) to MP 321.20 (Junction SR 277 Spur)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 277	MP 321.20 (Junction SR 277 Spur) to MP 336.45 (Junction SR 77)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 286	MP 0.00 (US/Mexico Border) to MP 45.48 (Junction SR 86)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 287	MP 111.72 (Junction SR 387) to MP 115.84 (Junction I-10)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 287	MP 115.84 (Junction I-10) to MP 125.81 (Junction SR 87)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 287	MP 134.75 (Junction SR 87) to MP 142.96 (Junction SB 79)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 288	MP 258.10 (Junction SR 188) to MP 262.44 (Salt River Bridge)	R17-6-406; R17-6-408		70'+ requires F/R	Over 8' requires class C permit	
State Route 288	MP 262.44 (Salt River Bridge - Structure 37)	R17-6-406; R17-6-408	12'	70'+ requires F/R	Over 8' requires class C permit	Legal weight as provided under R17-6-102, Table 1.
State Route 288	MP 262.44 (Salt River Bridge) to MP 311.90 (Route end near Young)	R17-6-406; R17-6-408		70'+ requires F/R	Over 8' requires class C permit	
State Route 289	MP 0.00 (Junction I-19) to MP 10.83 (Route end)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 303	MP 103.87 (Junction I-10) to MP 119.28 (Junction US 60, Grand Avenue)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 303	MP 119.28 (Junction US 60, Grand Avenue) to MP 139.27 (Junction I-17)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	
State Route 347	MP 160.89 (Junction SR 84) to MP 174.55 (Junction SR 238)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 347	MP 174.55 (Junction SR 238) to MP 189.31 (Junction I-10)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
State Route 366	MP 113.69 (Junction US 191) to MP 143.20 (Route end)	R17-6-406; R17-6-408; Seasonal Road Closure		Over 40' requires class C permit	Over 8' requires class C permit	
State Route 373	MP 385.65 (Junction SR 260) to MP 390.21 (End of route at Greer)	R17-6-406; R17-6-408		80'+ requires F/R	Over 12' - 16' = F/R	
State Route 377	MP 0.00 (Junction SR 277) to MP 33.83 (Junction SR 77)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 386	MP 0.00 (Junction SR 86) to MP 12.05 (Kitt Peak)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
State Route 387	MP 0.00 (Junctions SR 84 and SR 287) to MP 8.42 (Junction I-10)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 387	MP 8.42 (Junction I-10) to MP 15.72 (Junction SR 87)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 389	MP 0.00 (Utah State Line) to MP 32.60 (Junction US 89A)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
State Route 473	MP 0.00 (Junction SR 260) to MP 10.03 (Route end at Hawley Lake)	R17-6-406; R17-6-408; Seasonal Road Closure		60'+ requires F/R	Over 10' - 14' = F/R Over 14' requires class C permit	20,000
State Route 564	MP 374.28 (Junction US 160) to MP 383.46 (Route end)	R17-6-406; R17-6-408			Over 12' - 14' = F/R Over 14' requires class C permit	
State Route 587	MP 218.74 (Junction SR 87) to MP 225.14 (Junction I-10)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 60	MP 31.20 (Junction I-10) to MP 49.52 (Junction SR 72)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 60	MP 49.52 (Junction SR 72) to MP 85.91 (Junction SR 71)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 60	MP 85.91 (Junction SR 71) to MP 107.7 (Vulture Mine Road)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 60	MP 107.7 (Vulture Mine Road) to MP 110.24 (Washington Street)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.24 Eastbound (Washington Street Underpass, Wickenburg - Structure 535)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	13' 11"		Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.24 Westbound (Washington Street Underpass, Wickenburg - Structure 535)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	13' 7"		Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.25 Eastbound (Railroad Underpass, Wickenburg - Structure 195)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	13' 11'		Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.25 Westbound (Railroad Underpass, Wickenburg - Structure 195)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	13' 7"		Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.26 Eastbound (Frontier Street Underpass, Wickenburg - Structure 1000)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	13' 11"		Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.26 Westbound (Frontier Street Underpass, Wickenburg - Structure 1000)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	13' 7"		Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.26 (Frontier Street) to MP 110.33 (Junction US 93)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 60	MP 110.33 (Junction US 93) to MP 138.48 (Junction SR 303)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 60	MP 138.48 (Junction SR 303) to MP 148.90 (Junction SR 101)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 60	MP 148.90 (Junction SR 101) to MP 160.10 (Junction I-17)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 60	MP 172.00 (Junction I-10) to MP 172.90 (Hardy Drive)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 172.90 Eastbound (Hardy Drive Underpass - Structure 1376)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 6"		Over 14' - 16' = R	
U.S. Highway 60	MP 172.90 Westbound (Hardy Drive Underpass - Structure 1376)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 3"		Over 14' - 16' = R	
U.S. Highway 60	MP 172.90 (Hardy Drive) to MP 174.41 (Rural Road TI)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 174.41 Eastbound (Rural Road Underpass - Structure 1660)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
U.S. Highway 60	MP 174.41 (Rural Road TI) to MP 175.42 (McClintock Drive)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 175.42 Eastbound (McClintock Drive Underpass - Structure 1661)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
U.S. Highway 60	MP 175.42 Westbound (McClintock Drive Underpass - Structure 1661)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
U.S. Highway 60	MP 175.42 (McClintock Drive) to MP 176.29 (Junction SR 101)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 176.29 (Junction SR 101) to MP 176.49 (SB 101 Over US 60)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 176.49 Eastbound (SB 101 Over US 60 - Structures 1792, 1791, & 2101)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 8"		Over 14' - 16' = R	
U.S. Highway 60	MP 176.49 Westbound (SB 101 Over US 60 - Structures 1792, 1791, & 2101)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
U.S. Highway 60	MP 176.49 (SB 101 Over US 60) to MP 177.45 (Dobson Road)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 177.45 (Dobson Road Underpass - Structure 1795)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 60	MP 177.45 (Dobson Road) to MP 184.39 (Val Vista Drive TI)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 184.39 (Val Vista Drive Underpass - Structure 1883)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 10"		Over 14' - 16' = R	
U.S. Highway 60	MP 184.39 (Val Vista Drive TI) to MP 184.77 (39th Street)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 184.77 (39th Street Underpass - Structure 1918)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 11"		Over 14' - 16' = R	
U.S. Highway 60	MP 184.77 (39th Street) to MP 188.38 (Power Road)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 188.38 (Power Road Underpass - Structure 1924)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
U.S. Highway 60	MP 188.38 (Power Road) to MP 190.51 (Junction SR 202)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 190.51 (Junction SR 202) to MP 194.38 (Meridian Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 194.38 (Meridian Road Underpass - Structure 1438)	R17-6-405; R17-6-406; R17-6-408; R17-6-409	15' 9"		Over 14' - 16' = R	
U.S. Highway 60	MP 194.38 (Meridian Road) to MP 196.14 (Junction SR 88, Idaho Road)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = R	
U.S. Highway 60	MP 196.14 (Junction SR 88, Idaho Road) to MP 212.17 (Junction SR 79)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 60	MP 212.17 (Junction SR 79) to MP 226.87 (Junction SR 177)	R17-6-405; R17-6-406; R17-6-407; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 60	MP 226.87 (Junction SR 177) to MP 227.71 (Queen Creek Bridge)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 60	MP 227.71 (Queen Creek Bridge - Structure 406)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
U.S. Highway 60	MP 227.71 (Queen Creek Bridge) to MP 228.47 (Queen Creek Tunnel)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 11' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 60	MP 228.47 (Queen Creek Tunnel - Structure 407)	R17-6-406; R17-6-407; R17-6-408; * Loads 14' to 20' in height require F/R + 2 LE and shall drive in center of tunnel	14' *	80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 11' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 60	MP 228.47 (Queen Creek Tunnel) to MP 238.25 (Pinto Creek Bridge)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 11' - 14' = F/R Over 14' - 16' = F/R + 2 LE	

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 60	MP 238.25 (Pinto Creek Bridge - Structure 351)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 11' - 14' = F/R Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
U.S. Highway 60	MP 238.25 (Pinto Creek Bridge) to MP 247.04 (Junction SR 188)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 11' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 60	MP 247.04 (Junction SR 188) to MP 252.06 (Junction US 70)	R17-6-406; R17-6-407; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 11' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 60	MP 252.06 (Junction US 70) to MP 292.91 (Apache Bridge)	R17-6-406; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R Over 14' Prohibited	
U.S. Highway 60	MP 292.91 (Apache Bridge - Structure 1929)	R17-6-406; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R + 2 LE Over 14' Prohibited	Class A permitted vehicles with a gross weight of: 150,000 or less - no additional restrictions; 150,001 through 250,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permitted vehicles with a gross weight of over 250,000 require special analysis and approval from the ADOT Bridge Group.
U.S. Highway 60	MP 292.91 (Apache Bridge) to MP 318.14 (Junction SR 73)	R17-6-406; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R Over 14' Prohibited	
U.S. Highway 60	MP 318.14 (Junction SR 73) to MP 323.44 (Cedar Canyon Bridge)	R17-6-406; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 60	MP 323.44 (Cedar Canyon Bridge - Structure 215)	R17-6-406; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
U.S. Highway 60	MP 323.44 (Cedar Canyon Bridge) to MP 339.71 (Junction SR 260)	R17-6-406; R17-6-408		80'+ unarticulated requires F/R; 110'+ articulated requires F/R	Over 12' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 60	MP 339.71 (Junction SR 260) to MP 341.69 (Junction SR 260)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 60	MP 341.69 (Junction SR 260) to MP 342.77 (Junction SR 77)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 60	MP 342.77 (Junction SR 77) to MP 353.16 (Junction SR 61)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 60	MP 353.16 (Junction SR 61) to MP 384.45 (Junction US 180)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 60	MP 384.45 (Junction US 180) to MP 401.97 (New Mexico State Line)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 64	MP 465.40 (Junction US 160) to MP 469.54 (New Mexico State Line)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 70	MP 252.14 (Junction US 60) to MP 253.63 (Railroad Underpass)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 70	MP 253.63 (Railroad Underpass - Structure 562)	R17-6-406; R17-6-408	15' 6"		Over 14' - 16' = F/R	
U.S. Highway 70	MP 253.63 (Railroad Underpass) to MP 254.11 (Junction SR 77)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 70	MP 254.11 (Junction SR 77) to MP 339.45 (Junction US 191)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 70	MP 339.45 (Junction US 191) to MP 349.48 (Junction US 191)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 70	MP 349.48 (Junction US 191) to MP 378.90 (Junction SR 75)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 70	MP 378.90 (Junction SR 75) to MP 385.25 (New Mexico State Line)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89	MP 401.00 (Junction I-40) to MP 403.18 (Junction SB 40)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89	MP 418.59 (Junction SB 40) to MP 465.21 (Junction SR 64)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89	MP 465.21 (Junction SR 64) to MP 466.88 (Cameron Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 89	MP 466.88 (Cameron Bridge - Structure 532)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
U.S. Highway 89	MP 466.88 (Cameron Bridge) to MP 480.80 (Junction US 160)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89	MP 480.80 (Junction US 160) to MP 524.01 (Junction US 89A)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89	MP 524.01 (Junction US 89A) to MP 546.20 (Junction SR 98)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89	MP 546.20 (Junction SR 98) to MP 549.54 (Glen Canyon Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89	MP 549.54 (Glen Canyon Bridge - Structure 537)	R17-6-406; R17-6-408			Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 150,000 or less - no additional restrictions; 150,001 through 250,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permitted vehicles with a gross weight of over 250,000 require special analysis and approval from the ADOT Bridge Group.
U.S. Highway 89	MP 549.54 (Glen Canyon Bridge) to MP 556.99 (Utah State Line)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 89A	MP 524.07 (Junction US 89) to MP 537.86 (Navajo Bridge at Colorado River)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 89A	MP 537.86 (Navajo Bridge at Colorado River - Structure 2340)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 150,000 or less - no additional restrictions; 150,001 through 250,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permitted vehicles with a gross weight of over 250,000 require special analysis and approval from the ADOT Bridge Group.
U.S. Highway 89A	MP 537.86 (Navajo Bridge at Colorado River) to MP 547.00 (Cliffdwellers Lodge)	R17-6-406; R17-6-408			Over 10' - 14' = F/R Over 14' - 16' = F/R + 2 LE	
U.S. Highway 89A	MP 547.00 (Cliffdwellers Lodge) to MP 579.30 (Junction SR 67)	R17-6-406; R17-6-408			Over 8' 6" requires class C permit	
U.S. Highway 89A	MP 579.30 (Junction SR 67) to MP 609.23 (Junction SR 389)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 89A	MP 609.23 (Junction SR 389) to MP 613.03 (Utah State Line)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 93	MP 0.00 (Hoover Dam Bypass) to MP 67.20 (Junction SR 68)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	Nevada issues permit for Mike O'Callaghan – Pat Tillman Memorial Bridge (Colorado River Bridge).
U.S. Highway 93	MP 67.20 (Junction SR 68) to MP 71.10 (Junction I-40, Exit # 48)	R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 93	MP 91.38 (Junction I-40, Exit # 71) to MP 139.07 Southbound (Burro Creek Bridge)	R17-6-406; R17-6-407; R17-6-408			Over 14' - 16' = F/R + 2 LE	
U.S. Highway 93	MP 139.07 Southbound (Burro Creek Bridge - Structure 846)	R17-6-406; R17-6-407; R17-6-408			Over 14' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 150,000 or less - no additional restrictions; 150,001 through 250,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permitted vehicles with a gross weight of over 250,000 require special analysis and approval from the ADOT Bridge Group.
U.S. Highway 93	MP 139.07 Southbound (Burro Creek Bridge) to MP 154.85 (Junction SR 97)	R17-6-406; R17-6-407; R17-6-408			Over 14' - 16' = F/R + 2 LE	
U.S. Highway 93	MP 154.85 (Junction SR 97) to MP 182.90 (Junction SR 71)	R17-6-406; R17-6-407; R17-6-408			Over 14' - 16' = F/R + 2 LE	
U.S. Highway 93	MP 182.90 (Junction SR 71) to MP 193.61 (Junction SR 89)	R17-6-406; R17-6-407; R17-6-408			Over 14' - 16' = F/R + 2 LE	
U.S. Highway 93	MP 193.61 (Junction SR 89) to MP 199.67 (Junction US 60 in Wickenburg)	R17-6-406; R17-6-407; R17-6-408			Over 14' - 16' = F/R + 2 LE	
U.S. Highway 95	MP 0.00 (US/Mexico Border) to MP 19.84 (32nd Street East)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 95	MP 19.84 (32nd Street East) to MP 24.35 (Junction I-8)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 95	MP 24.35 (Junction I-8) to MP 31.87 (Avenue 9E)	R17-6-404; R17-6-405; R17-6-406; R17-6-408; R17-6-409			Over 14' - 16' = F/R	
U.S. Highway 95	MP 31.87 (Avenue 9E) to MP 104.25 (Junction I-10)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 95	MP 104.25 (Junction I-10) to MP 104.51 (SB 10 in Quartzsite)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 311.46 (Junction US 89) to MP 321.86 (Junction SR 264)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 321.86 (Junction SR 264) to MP 361.61 (Junction SR 98)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 361.61 (Junction SR 98) to MP 374.28 (Junction SR 564)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 374.28 (Junction SR 564) to MP 393.57 (Junction US 163)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 393.57 (Junction US 163) to MP 434.87 (Junction US 191)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 434.87 (Junction US 191) to MP 437.22 (Junction US 191; BIA 12)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 437.22 (Junction US 191; BIA 12) to MP 465.40 (Junction US 64)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 160	MP 465.40 (Junction US 64) to MP 470.73 (New Mexico State Line)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 163	MP 393.52 (Junction US 160) to MP 396.16 (Laguna Wash Bridge)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	

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Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 163	MP 396.16 (Laguna Wash Bridge - Structure 25)	R17-6-406; R17-6-408			Over 12' - 16' = F/R + 2 LE	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
U.S. Highway 163	MP 396.16 (Laguna Wash Bridge) to MP 416.71 (Utah State Line)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 180	MP 215.44 (Junction SB 40) to MP 265.82 (Junction SR 64)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 180	MP 307.30 (Junction SR 77) to MP 343.13 (Junction SR 180A)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 180	MP 343.13 (Junction SR 180A) to MP 358.44 (Junction SR 61)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 180	MP 358.44 (Junction SR 61) to MP 368.92 (Junction US 191)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 180	MP 368.92 (Junction US 191) to MP 394.36 (Junction US 60)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 180	MP 400.61 (Junction US 60) to MP 426.33 (Junction US 191)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 180	MP 426.33 (Junction US 191) to MP 433.26 (New Mexico State Line)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 191	MP 0.00 (Junction SR 80) to MP 38.12 (Junction SR 181)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 38.12 (Junction SR 181) to MP 66.55 (Junction I-10)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 87.43 (Junction I-10) to MP 104.38 (Junction SR 266)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 104.38 (Junction SR 266) to MP 113.69 (Junction SR 366)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 113.69 (Junction SR 366) to MP 121.02 (Junction US 70)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 130.60 (Junction US 70) to MP 154.90 Southbound (Cold Creek Bridge)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 154.90 Southbound (Cold Creek Bridge - Structure 258)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 154.90 Southbound (Cold Creek Bridge) to MP 163.95 (Temporary US 191, Clifton)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 179.36 (Junction at end of Temporary US 191) to MP 215.41 (Forest Service Route 25)	R17-6-406; R17-6-408		Over 40' requires class C permit	Over 8' requires class C permit	
U.S. Highway 191	MP 215.41 (Forest Service Route 25) to MP 253.74 (Junction US 180, Alpine)	R17-6-406; R17-6-408			Over 8' requires class C permit	
U.S. Highway 191	MP 315.55 (Junction US 180 in St Johns) to MP 344.49 (Junction SR 61)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 344.49 (Junction SR 61) to MP 368.47 (Railroad Overpass, Sanders)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 368.47 (Railroad Overpass, Sanders - Structure 346)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	Legal weight as provided under R17-6-102, Table 1.
U.S. Highway 191	MP 368.47 (Railroad Overpass, Sanders) to MP 368.50 (Junction I-40 in Sanders)	R17-6-406; R17-6-408			Over 14' - 16' = F/R	
U.S. Highway 191	MP 374.00 (Junction I-40) to MP 411.63 (Junction SR 264, Ganado)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	

Department of Transportation – Oversize and Overweight Special Permits

Route	Restriction Location (MP = Milepost)	Transport Subject to:	Height	Length	Width	Weight (in lbs)
Escort requirements: F = front escort, R = rear escort, F/R = front and rear escort, and LE = law enforcement escort						
U.S. Highway 191	MP 417.55 (Junction SR 264) to MP 510.34 (Junction US 160)	R17-6-406; R17-6-408			Over 12' - 16' = F/R	
U.S. Highway 191 Temp (UX 191)	MP 163.95 (Temporary US 191, Clifton) to MP 169.00 (Phelps Dodge Mine entrance)	R17-6-406; R17-6-408			Over 8' requires class C permit	
U.S. Highway 191 Temp (UX 191)	MP 169.00 (Phelps Dodge Mine entrance) to MP 169.20 (Phelps Dodge Viaduct)	R17-6-406; R17-6-408			Over 8' requires class C permit	
U.S. Highway 191 Temp (UX 191)	MP 169.20 (Phelps Dodge Viaduct - Structure 1631)	R17-6-406; R17-6-408			Over 8' requires class C permit	Class A permitted vehicles with a gross weight of: 100,000 or less - no additional restrictions; 100,001 through 150,000 - drivers shall: Coordinate road closures by or under the direction of law enforcement; and Cross on center of bridge at a constant speed of no more than 10 mph while on bridge. Class C permits and special analysis and approval from the ADOT Bridge Group are required for vehicles with a gross weight of 150,001 or more.
U.S. Highway 191 Temp (UX 191)	MP 169.20 (Phelps Dodge Viaduct) to MP 169.30 (Railroad Underpass)	R17-6-406; R17-6-408			Over 8' requires class C permit	
U.S. Highway 191 Temp (UX 191)	MP 169.30 (Railroad Underpass - Structure 1632)	R17-6-406; R17-6-408	15'		Over 8' requires class C permit	
U.S. Highway 191 Temp (UX 191)	MP 169.30 (Railroad Underpass) to MP 169.39 (Rock Tunnel)	R17-6-406; R17-6-408			Over 8' requires class C permit	
U.S. Highway 191 Temp (UX 191)	MP 169.39 (Rock Tunnel - Structure 1633)	R17-6-406; R17-6-408	12' 6"		Over 8' requires class C permit	
U.S. Highway 191 Temp (UX 191)	MP 169.39 (Rock Tunnel) to MP 179.36 (Junction at end of Temporary US 191)	R17-6-406; R17-6-408			Over 8' requires class C permit	

Historical Note

New Table made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-413. Page-Lake Powell Area Houseboat Transport Provisions

- A. A permit applicant shall use the procedures under this Section to apply for an extended approval class C special permit to transport a houseboat of the dimensions specified under subsection (C) on a highway listed under Table 5.
- B. A permit applicant shall apply for a permit under this Section at the following Department field office:
 Page Port of Entry
 US 89 MP 551
 P.O. Box 1807
 Page, AZ 86040
 Telephone: (928) 645-3269
 Fax: (928) 645-9360
- C. An extended approval class C special permitted vehicle with at least one front and one rear escort vehicle may operate on a highway listed under Table 5 during daylight hours as provided under R17-6-401, including any weekday, weekend, or holiday, if it does not exceed dimensions as follows:
 - 1. 16 feet 6 inches in width;
 - 2. 25 feet in height;

- 3. 120 feet in length;
- 4. 150,000 pounds; or
- 5. Axle weight limits listed in Tables 3.01 through 3.09.
- D. An extended approval class C special permitted vehicle and load that exceeds 17 feet in height shall have a front escort with a height pole.
- E. For an extended approval class C special permitted vehicle and load that exceeds 14 feet in width, a permittee shall ensure an appropriate level of traffic control at the Glen Canyon Bridge on US 89 by closing access to the bridge at each end and at the visitor center driveway.
- F. If a permit applicant seeks to transport outside the requirements of this Section, the permit applicant shall apply for a class C special permit according to the procedures provided under R17-6-204.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 4648, effective October 8, 2003 (Supp. 03-4). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

Table 5. Page-Lake Powell Area Highways

Route	Location (MP = Milepost)
State Route 98	MP 299.50 (Junction BIA 22, Antelope Canyon); to MP 294.67 (End of route at Junction US 89)
U.S. Highway 89	MP 546.19 (Junction SR 98); to MP 556.99 (Utah State Line)

Historical Note

New Table made by final rulemaking at 9 A.A.R. 4648, effective October 8, 2003 (Supp. 03-4). Table amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-414. Lake-specific Weekend and Holiday Transport Exception

A permittee or driver that transports a personal watercraft load of no more than 12 feet in width under a class A special permit may operate from one-half hour before sunrise to one-half hour after sunset on a weekend or holiday on a state highway within 10 miles of an area constructed and maintained for the purpose of launching and retrieving watercraft for the following Arizona lakes:

1. Alamo,
2. Havasu,
3. Mead,
4. Mohave,
5. Powell, and
6. Saguaro.

Historical Note

Section R17-6-414 renumbered from R17-6-407 and amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-415. Reserved**R17-6-415. Emergency Expired****Historical Note**

New Section made by emergency rulemaking at 19 A.A.R. 928, approved by the Attorney General April 24, 2013, effective for 180 days (Supp. 13-2). Emergency Expired (Supp. 13-3).

ARTICLE 5. ENVELOPE PERMIT SPECIAL PROVISIONS

Article 5, consisting of Sections R17-6-501 through R17-6-505, made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1).

R17-6-501. Envelope Permit Required Recordkeeping

A. An envelope permit holder shall maintain in this state, for at least three years, records and other data for all vehicles operated, and cargo transported, under an envelope permit as required under A.R.S. § 28-1149. The records and other data shall include:

1. Bills of lading,
2. Shipping manifests, and
3. Time cards or invoices.

B. A record retained by an envelope permit holder under subsection (A) shall contain, at least, the following information:

1. Date of document preparation,
2. Name of shipper and name of receiver,
3. Address of load origination,
4. Address of load destination, and
5. Dates of transport.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final

rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-502. Envelope Permit Suspension Point System

The Director shall suspend an envelope permit, as prescribed under A.R.S. § 28-1147, by assigning points to the permittee for envelope permit violations as follows:

1. Minor violations - one point:
 - a. Improper or inadequate flagging as provided under R17-6-302 and R17-6-307,
 - b. Improper or inadequate lighting as provided under R17-6-304 and R17-6-307,
 - c. Improper or inadequate "OVERSIZE LOAD" signage display as provided under R17-6-303,
 - d. Use of an escort vehicle not equipped as provided under R17-6-305,
 - e. Failing to maintain proper follow-distance from another oversize or overweight vehicle or load as provided under R17-6-401, or
 - f. Exceeding permitted speed but not exceeding posted speed as provided under R17-6-402.
2. Major violations - three points:
 - a. Transporting a permitted vehicle or load on a highway restricted to certain hours of travel under R17-6-404 through R17-6-407, or R17-6-412, Table 4;
 - b. Failing to display flags or lights when required under R17-6-302, R17-6-304, or R17-6-307;
 - c. Failing to display "OVERSIZE LOAD" signage when required under R17-6-303;
 - d. Exceeding the posted speed limit; or
 - e. Transporting a reducible load under an envelope permit.
3. Weight Violations, 1-36 points:
 - a. Gross vehicle weight exceeds the maximum weight allowed under R17-6-411:
 - i. Less than 2% over allowable weight - one point,
 - ii. 2% but less than 4% over allowable weight - two points,
 - iii. 4% but less than 6% over allowable weight - three points,
 - iv. 6% but less than 9% over allowable weight - six points,
 - v. 9% but less than 12% over allowable weight - 10 points,
 - vi. 12% but less than 15% over allowable weight - 18 points, or
 - vii. 15% or more over allowable weight - 36 points.
 - b. For each axle group exceeding the maximum weight allowed under R17-6-411:
 - i. Less than 4% over allowable weight - one point,
 - ii. 4% but less than 6% over allowable weight - two points,
 - iii. 6% but less than 9% over allowable weight - four points,
 - iv. 9% but less than 12% over allowable weight - six points,
 - v. 12% but less than 15% over allowable weight - 10 points,
 - vi. 15% but less than 20% over allowable weight - 18 points, or
 - vii. 20% or more over allowable weight - 36 points.
4. Flagrant Violations - 36 points:
 - a. Transporting a permitted load on a highway during a hazardous condition restricting travel under R17-6-403 or in violation of a law enforcement agency order,
 - b. Exceeding an envelope dimension as prescribed under A.R.S. § 28-1144,
 - c. Falsifying a permit application,
 - d. Altering a permit,
 - e. Failing to pay repair costs for highway damages as prescribed under A.R.S. § 28-1107,

Department of Transportation – Oversize and Overweight Special Permits

- f. Transporting a permitted load on a restricted highway or restricted bridge,
- g. Failing to use an escort vehicle as provided under R17-6-305, or
- h. Failing to use an escort vehicle with a driver that meets the standards provided under R17-6-305.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-503. Envelope Permit Suspension; Revocation; Enforcement

- A. The Director shall suspend an envelope permit for point accumulation within any 12-month period according to the following schedule:
 - 1. 14-19 points, one-week suspension;
 - 2. 20-29 points, two-week suspension;
 - 3. 30-35 points, four-week suspension; and
 - 4. More than 35 points, one-year suspension.
- B. The Director shall revoke an envelope permit as provided under A.R.S. § 28-1147 for the following reasons:
 - 1. Frequency of violation indicates a flagrant disregard for the law or the safety of the public,
 - 2. A permittee does not have an established place of business, or
 - 3. A permittee fails to maintain records as prescribed under R17-6-501 and A.R.S. § 28-1149.
- C. A permittee shall surrender the permit to the Department within 72 hours after an order of suspension or revocation is effective.
 - 1. If the permittee fails to surrender the permit within five working days of written demand, the Director shall suspend the permittee's envelope permit privileges for one year in addition to any other penalty assessed.
 - 2. The Department shall retrieve the permit if the permittee fails to return the permit within the prescribed time.
- D. The Department shall not issue an envelope permit to a permittee during the permittee's period of suspension or revocation.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-504. Notice of Point Assessment, Denial, Suspension, or Revocation

- A. The Department shall send to a permittee's last known address of record notice of the following:
 - 1. Point assessment; or
 - 2. Permit denial, suspension, or revocation.
- B. The notice shall inform the permittee of:
 - 1. The right to appeal the action, and
 - 2. The procedure for requesting a hearing.
- C. Any action taken under this Section becomes effective 25 days after the Department's action notice date unless a permittee submits a timely hearing request as provided under 17 A.A.C. 1, Article 5.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665,

effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-505. Envelope Permit Reapplication

- A. An envelope permit applicant denied issuance by the Department, as prescribed under A.R.S. § 28-1142, shall not reapply for an envelope permit for two years from the date of denial.
- B. An envelope permit applicant, who has previously had an envelope permit revoked by the Department under A.R.S. § 28-1147, shall not reapply for an envelope permit for two years from the date of revocation.
- C. Upon reapplication, an applicant shall show by a preponderance of evidence that the underlying cause for denial or revocation has been removed.

Historical Note

New Section made by final rulemaking at 9 A.A.R. 665, effective April 8, 2003 (Supp. 03-1). Amended by final rulemaking at 19 A.A.R. 2486, effective September 7, 2013 (Supp. 13-3).

R17-6-506. Page-Lake Powell Area Houseboat Hauling Envelope Permit

- A. An applicant requesting an envelope permit for a vehicle hauling a houseboat under A.R.S. § 28-1144(B) shall:
 - 1. Apply to the Department using the application procedure provided under R17-6-103; and
 - 2. Pay the applicable fees prescribed under R17-6-210.
- B. A permittee issued an envelope permit under this Section shall:
 - 1. Comply with all provisions applicable to the application, issuance, and maintenance of envelope permits under this Chapter;
 - 2. Notify the Department as required under A.R.S. § 28-1144(B) before transporting a houseboat authorized by the envelope permit. This notification shall include at least the following information:
 - a. The number of the authorizing envelope permit;
 - b. The date of transport;
 - c. The transport origination;
 - d. The transport destination;
 - e. The name and hull identification number of the houseboat being transported;
 - f. The overall length, height, and width of the vehicle and load combination;
 - g. The overall gross weight of the vehicle and load combination; and
 - h. The total number of axles on the vehicle and load combination;
 - 3. Notify the Department each time information submitted under subsection (B)(2) of this Section changes by submitting a new notification to the Department; and
 - 4. Complete the notifications required under subsections (B)(2) and (3) of this Section electronically through the Department's web site at www.azdot.gov.

Historical Note

New Section made by final rulemaking at 19 A.A.R. 892, effective June 1, 2013 (Supp. 13-2).

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Section D
Statutory Authority, Definitions, and Other Applicable Rules

TITLE 17. TRANSPORTATION
CHAPTER 6. DEPARTMENT OF TRANSPORTATION
OVERDIMENSIONAL PERMITS

R17-6-101 through R17-6-505
(All Sections, Tables, and Illustrations)

A.R.S. § 28-1821. Adoption of agreement.

The multistate highway transportation agreement is entered into and enacted into law as follows:

Multistate Highway Transportation Agreement

Pursuant to and in conformity with the laws of their respective jurisdictions, the participating jurisdictions, acting by and through their officials lawfully authorized to execute this agreement, mutually agree as follows:

Article I

Findings and Purposes

Section 1. Findings.

The participating jurisdictions find that:

- (a) The expanding regional economy depends on expanding transportation capacity.
- (b) Highway transportation is the major mode for movement of people and goods in the western states.
- (c) Uniform application in the west of more adequate vehicle size and weight standards will result in a reduction of pollution, congestion, fuel consumption and related transportation costs which are necessary to permit increased productivity.
- (d) A number of western states, already having adopted substantially the 1964 bureau of public roads recommended vehicle size and weight standards, still find current federal limits more restrictive.
- (e) The participating jurisdictions are most capable of developing vehicle size and weight standards most appropriate for the regional economy and transportation requirements, consistent with and in recognition of principles of highway safety.

Section 2. Purposes.

The purposes of this agreement are to:

- (a) Adhere to the principle that each participating jurisdiction should have the freedom to develop vehicle size and weight standards that it determines most appropriate to its economy and highway system.
- (b) Establish a system authorizing the operation of vehicles traveling between two or more participating jurisdictions at more adequate size and weight standards.
- (c) Promote uniformity among participating jurisdictions in vehicle size and weight standards on the basis of the objectives set forth in this agreement.
- (d) Secure uniformity as far as possible of administrative procedures in the enforcement of recommended vehicle size and weight standards.

- (e) Provide means for the encouragement and utilization of research which will facilitate the achievement of the purposes of this section, with due regard for the findings set forth in section 1 of this article.
- (f) Facilitate communication between legislators, state transportation administrators and commercial industry representatives in addressing the emerging highway transportation issues in participating jurisdictions.

Article II

Definitions

Section 1. As used in this agreement:

- (a) "Cooperating committee" means a body composed of the designated representatives from the participating jurisdictions.
- (b) "Designated representative" means a person authorized pursuant to section 28-1822 to represent the jurisdiction.
- (c) "Jurisdiction" means a state of the United States or the District of Columbia.
- (d) "Vehicle" means any vehicle as defined by statute to be subject to size and weight standards which operates in two or more participating jurisdictions.

Article III

General Provisions

Section 1. Qualifications for membership.

Participation in this agreement is open to jurisdictions which subscribe to the findings, purposes and objectives of this agreement and will seek legislation necessary to accomplish these objectives.

Section 2. Cooperation.

The participating jurisdictions, working through their designated representatives, shall cooperate and assist each other in achieving the desired goals of this agreement pursuant to appropriate statutory authority.

Section 3. Effect of headings.

Article and section headings contained in this agreement are not deemed to govern, limit, modify or in any manner affect the scope, meaning or intent of the provisions of any article or section of this agreement.

Section 4. Vehicle laws and regulations.

This agreement does not authorize the operation of a vehicle in any participating jurisdiction contrary to the laws or regulations of the jurisdiction.

Section 5. Interpretation.

The final decision regarding interpretation of questions at issue relating to this agreement shall be reached by unanimous joint action of the participating jurisdictions, acting through the designated representatives. Results of all such actions shall be placed in writing.

Section 6. Amendment.

The participating jurisdictions may amend this agreement by unanimous joint action, acting through the officials of the jurisdictions authorized to enter into this agreement, subject to the requirements of Article III,

section 4. Any amendment shall be placed in writing and become a part of this agreement but shall not become effective as part of this agreement until adopted by the legislature.

Section 7. Restrictions, conditions or limitations.

Any jurisdiction entering this agreement shall provide each other participating jurisdiction with a list of any restriction, condition or limitation on the general terms of this agreement, if any.

Section 8. Additional jurisdictions.

Additional jurisdictions may become members of this agreement by signing and accepting the terms of the agreement.

Article IV

Cooperating Committee

Section 1. Each participating jurisdiction shall have two designated representatives. Pursuant to Article III, section 2, the designated representatives of the participating jurisdictions constitute the cooperating committee which may:

- (a) Collect, correlate, analyze and evaluate information resulting or derivable from research and testing activities in relation to vehicle size and weight related matters.
- (b) Recommend and encourage the undertaking of research and testing in any aspect of vehicle size and weight or related matter if, in their collective judgment, appropriate or sufficient research or testing has not been undertaken.
- (c) Recommend changes in law or policy with emphasis on compatibility of laws and uniformity of administrative rules or regulations which would promote effective governmental action or coordination in the field of vehicle size and weight related matters.
- (d) Recommend improvements in highway operations, in vehicular safety and in state administration of highway transportation laws.
- (e) Perform functions necessary to facilitate the purposes of this agreement.

Section 2. Each designated representative of a participating jurisdiction is entitled to one vote only. No action of the committee is approved unless a majority of the total number of votes cast by the designated representatives of the participating jurisdictions is in favor of the action.

Section 3. The committee shall meet at least once annually and shall elect, from among its members, a chairman, a vice-chairman and a secretary.

Section 4. The committee shall submit annually to the legislature of each participating jurisdiction a report setting forth the work of the committee during the preceding year and including recommendations developed by the committee. The committee may submit such additional reports as it deems appropriate or desirable.

Article V

Objectives of the Participating Jurisdictions

Section 1. Objectives.

The participating jurisdictions declare that:

- (a) It is the objective of the participating jurisdictions to obtain more efficient and more economical transportation by motor vehicles between and among the participating jurisdictions by encouraging the

adoption of standards that will, as minimums, allow the operation on all state highways, except those determined through engineering evaluation to be inadequate, with a single axle weight of twenty thousand pounds, a tandem axle weight of thirty-four thousand pounds, and a gross vehicle or combination weight of that resulting from application of the formula:

$$W = 500 ((LN/N - 1) + 12N + 36)$$

Where W = maximum weight in pounds carried on any group of two or more axles computed to the nearest five hundred pounds.

L = distance in feet between the extremes of any group of two or more consecutive axles.

N = number of axles in the group under consideration.

- (b) It is the objective of the participating jurisdictions that the operation of a vehicle or combination of vehicles in interstate commerce according to the provisions of Subsection (a) of this section be authorized under special permit authority by each participating jurisdiction for vehicle combinations in excess of a statutory weight of eighty thousand pounds or statutory lengths, or both.
- (c) It is the objective of the participating jurisdictions to facilitate and expedite the operation of any vehicle or combination of vehicles between and among the participating jurisdictions under the provisions of Subsection (a) or (b) of this section and to that end the participating jurisdictions agree, through their designated representatives, to meet and cooperate in the consideration of vehicle size and weight related matters including the development of: uniform enforcement procedures; additional vehicle size and weight standards; operational standards; agreements or compacts to facilitate regional application and administration of vehicle size and weight standards; uniform permit procedures; uniform application forms; rules and regulations for the operation of vehicles, including equipment requirements, driver qualifications and operating practices and such other matters as may be pertinent.
- (d) The cooperating committee may recommend that the participating jurisdictions jointly secure congressional approval of this agreement, specifically of the vehicle size and weight standards set forth in Subsection (a) of this section.
- (e) It is the further objective of the participating jurisdictions to:
 - (i) Establish transportation laws and regulations to meet regional needs and to promote an efficient, safe and compatible transportation network.
 - (ii) Develop standards that facilitate the most efficient and environmentally sound operation of vehicles on highways and that are consistent with and in recognition of principles of highway safety.
 - (iii) Establish programs to increase productivity and reduce congestion, fuel consumption and related transportation costs and enhance air quality through the uniform application of state vehicle laws and regulations.

Article VI

Entry Into Force and Withdrawal

Section 1. This agreement enters into force when enacted into law by any two or more jurisdictions. Thereafter, this agreement becomes effective as to any other jurisdiction upon its enactment, except as otherwise provided in Article III, section 8.

Section 2. Any participating jurisdiction may withdraw from this agreement by cancelling the agreement, but no such withdrawal takes effect until thirty days after the designated representative of the withdrawing jurisdiction gives notice in writing of the withdrawal to all other participating jurisdictions.

Article VII

Construction and Severability

Section 1. This agreement shall be liberally construed so as to effectuate its purposes.

Section 2. The provisions of this agreement are severable and if any phrase, clause, sentence or provision of this agreement is declared to be contrary to the constitution of any participating jurisdiction or the applicability to any government, agency, person or circumstance is held invalid, the validity of the remainder of this agreement is not affected. If this agreement is held contrary to the constitution of any participating jurisdiction, the agreement remains in full force as to the jurisdictions affected as to all severable matters.

Article VIII

Filing of Documents

Section 1. A copy of this agreement, its amendments, and rules or regulations promulgated under the agreement and interpretations of the agreement shall be filed in the highway department in each participating jurisdiction and made available for review by interested parties.

Article IX

Existing Statutes Not Repealed

Section 1. All existing statutes prescribing weight and size standards and all existing statutes relating to special permits continue to be effective until amended or repealed by law.

Article X

State Government Departments

Authorized to Cooperate With Cooperating Committee

Section 1. If appropriations are made available the departments, agencies and officers of the government of this state may cooperate with and assist the cooperating committee within the scope contemplated by Article IV, section 1, Subsections (a) and (b). The departments, agencies and officers of the government of this state are authorized to cooperate with the cooperating committee.

A.R.S. § 28-304. Powers and duties of the board; transportation facilities.

A. The board shall:

1. Develop and adopt a statewide transportation policy statement. The policy statement shall be adopted as described in section 28-306.

2. Adopt a long-range statewide transportation plan. The plan shall be adopted as described in section 28-307.
 3. Adopt uniform transportation planning practices and performance based planning processes for use by the department. The practices and processes shall be developed as described in sections 28-502 and 28-503.
 4. Adopt transportation system performance measures and factors and data collection standards to be used by the department. The performance measures, factors and standards shall be developed as described in sections 28-504 and 28-505.
- B. With respect to highways, the board shall:
1. Establish a complete system of state highway routes.
 2. Determine which state highway routes or portions of the routes are accepted into the state highway system and which state highway routes to improve.
 3. Establish, open, relocate or alter a portion of a state route or state highway.
 4. Vacate or abandon a portion of a state route or state highway as prescribed in section 28-7209.
 5. Sell board funding obligations to the state treasurer as provided in section 28-7678.
- C. The board shall:
1. Establish policies to guide the development or modification of the five year transportation facilities construction program that are consistent with the principles of performance based planning developed pursuant to article 7 of this chapter. The percentage of department discretionary monies allocated to the region in the regional transportation plan approved pursuant to chapter 17, article 1 of this title shall not increase or decrease unless the board, in cooperation with the regional planning agency, agrees to change the percentage of the discretionary monies.
 2. Award all construction contracts for transportation facilities.
 3. Monitor the status of these construction projects.
- D. The board shall determine priority program planning with respect to transportation facilities using the performance based methods developed pursuant to article 7 of this chapter.
- E. With respect to transportation facilities other than highways, the board shall establish, open, relocate, alter, vacate or abandon all or portions of the facilities.
- F. With respect to aeronautics, the board shall perform the functions prescribed in chapter 25 of this title.
- G. The board shall not spend any monies, adopt any rules or implement any policies or programs to convert signs to the metric system or to require the use of the metric system with respect to designing or preparing plans, specifications, estimates or other documents for any highway project before the conversion or use is required by federal law, except that the board may:
1. Spend monies and require the use of the metric system with respect to designing or preparing plans, specifications, estimates or other documents for a highway project that is awarded before October 1, 1997 and that is exclusively metric from its inception.
 2. Prepare for conversion to and use of the metric system not more than six months before the conversion or use is required by federal law.

A.R.S. § 28-363. Duties of the director; administration.

A. The director shall:

1. Supervise and administer the overall activities of the department and its divisions and employees.
2. Appoint assistant directors for each of the divisions.
3. Provide for the assembly and distribution of information to the public concerning department activities.
4. Delegate functions, duties or powers as the director deems necessary to carry out the efficient operation of the department.
5. Exercise complete and exclusive operational control and jurisdiction over the use of state highways and routes.
6. Coordinate the design, right-of-way purchase and construction of controlled access highways that are either state routes or state highways and related grade separations of controlled access highways.
7. Coordinate the design, right-of-way purchase, construction, standard and reduced clearance grade separation, extension and widening of arterial streets and highways under chapters 17 and 18 of this title.
8. Assist regional transportation planning agencies, councils of government, tribal governments, counties, cities and towns in the development of their regional and local transportation plans to ensure that the streets, highways and other regionally significant modes of transportation within each county form an integrated and efficient regional system.
9. On or before December 1, present an annual report to the speaker of the house of representatives and the president of the senate documenting the expenditures of monies under chapters 17 and 18 of this title during the previous fiscal year relating to the design, right-of-way purchase or construction of controlled access highways that are accepted in the state highway system as state routes or state highways or related grade separations of controlled access highways that are included in the regional transportation plans of the counties.
10. Designate the necessary agencies for enforcing the provisions of the laws the director administers or enforces.
11. Exercise other duties or powers as the director deems necessary to carry out the efficient operation of the department.
12. Cooperate with the Arizona-Mexico commission in the governor's office and with researchers at universities in this state to collect data and conduct projects in the United States and Mexico on issues that are within the scope of the department's duties and that relate to quality of life, trade and economic development in this state in a manner that will help the Arizona-Mexico commission to assess and enhance the economic competitiveness of this state and of the Arizona-Mexico region.
13. Develop a plan to increase use of bypass routes by vehicles on days of poor visibility in the Phoenix metropolitan area.

B. The assistant directors appointed pursuant to subsection A of this section are subject to title 41, chapter 4, article 4.

- C. The director shall not spend any monies, adopt any rules or implement any policies or programs to convert signs to the metric system or to require the use of the metric system with respect to designing or preparing plans, specifications, estimates or other documents for any highway project before the conversion or use is required by federal law, except that the director may:
1. Spend monies and require the use of the metric system with respect to designing or preparing plans, specifications, estimates or other documents for a highway project that is awarded before October 1, 1997 and that is exclusively metric from its inception.
 2. Prepare for conversion to and use of the metric system not more than six months before the conversion or use is required by federal law.

A.R.S. § 28-364. Powers of the director.

- A. The director may provide technical transportation planning expertise to local governments when requested, coordinate local government transportation planning with regional and state transportation planning and guide local transportation planning to assure compliance with federal requirements. The planning authority granted by this subsection does not preempt planning responsibilities and decisions of local governments.
- B. If the governor declares a state of emergency, the director may contract and do all things necessary to provide emergency transportation services for the residents in the affected areas whether the emergency transportation is by street, rail or air.
- C. On a determination that it is in this state's best interest, the director may authorize payment for necessary relocation costs in advance of work being performed if an existing facility owned by the United States must be relocated or adjusted due to construction, modification or improvement of a state highway. The director shall base each advance payment on an estimate of cost of the proposed relocation or adjustment prepared by the federal government and acceptable to the director and shall base the final compensation on the actual agreed cost.
- D. The director of the department of transportation in consultation with the director of the department of public safety shall develop procedures to exchange information for any purpose related to sections 28-1324, 28-1325, 28-1326, 28-1462 and 28-3318.

A.R.S. § 28-366. Director; rules.

The director shall adopt rules pursuant to title 41, chapter 6 as the director deems necessary for:

1. Collection of taxes and license fees.
2. Public safety and convenience.
3. Enforcement of the provisions of the laws the director administers or enforces.
4. The use of state highways and routes to prevent the abuse and unauthorized use of state highways and routes.

A.R.S. § 28-369. Law enforcement powers; ports of entry; violation; classification.

- A. The director and officers, agents and employees of the department or local or state law enforcement agencies the director designates are peace officers. The director may designate:
 - 1. Regular peace officers with like authority of other peace officers of this state or cities and towns of this state.
 - 2. Specialty peace officers whose powers are limited to the enforcement of motor vehicle laws and rules.
- B. The director and designated officers, agents and employees may exercise the powers prescribed in subsection A of this section throughout this state.
- C. A regular peace officer designated pursuant to subsection A, paragraph 1 of this section:
 - 1. Shall meet the minimum qualifications established for peace officers pursuant to section 41-1822.
 - 2. Except as provided in title 38, chapter 5, article 4, is not eligible to participate in the public safety personnel retirement system.
- D. This section does not preempt the authority and jurisdiction of established agencies and political subdivisions of this state.
- E. A peace officer as defined in section 41-1701 or a peace officer designated in subsection A of this section may require a vehicle that is subject to the fee in section 28-5433 or the requirements of sections 28-2321 through 28-2324 to stop at a port of entry in this state for the purpose of enforcing a motor vehicle law prescribed in this title. A person who fails to stop as required by this subsection is guilty of a class 1 misdemeanor.

A.R.S. § 28-7045. Director; state highway and route use; rules.

The director shall exercise complete and exclusive operational control and jurisdiction over the use of state highways and routes and adopt rules regarding the use as the director deems necessary to prevent the abuse and unauthorized use of these highways and routes.

A.R.S. § 40-360.43. Activity in close proximity to lines; clearance arrangements; procedure; payment; notice.

- A. If any person or business entity desires to temporarily carry on any function, activity, work or operation in closer proximity to any high voltage overhead line than permitted by this article, the person or business entity responsible for performing the work shall promptly notify the public utility operating the high voltage overhead line. The person or business entity may perform the work only after satisfactorily mutual arrangements, including coordination of work and construction schedules, have been made between the public utility operating the lines and the person or business entity responsible for performing the work. Arrangements may include placement of temporary mechanical barriers to separate and prevent contact between material, equipment or persons and the high voltage overhead lines or temporary deenergization and grounding or temporary relocation or raising of the high voltage overhead lines.

- B. The person or business entity responsible for performing the work in the vicinity of the high voltage overhead lines shall pay any actual expenses of the public utility operating high voltage overhead lines in providing arrangements for clearances, except in instances where the public utility operating high voltage overhead lines has installed lines within ten feet of an existing fixture or structure after the fixture or structure has been in place at the permanent location. The public utility is not required to provide the arrangements for clearances until an agreement for payment has been made.
- C. The public utility shall commence construction for temporary clearances within five working days of an agreement for payment, if required, or from the date of the request of the person responsible for the work. Once initiated, the clearance work will continue without interruption to completion.

23 U.S.C. § 127. Vehicle weight limitations—Interstate System

(a) In General.—

- (1) The Secretary shall withhold 50 percent of the apportionment of a State under section 104(b)(1) in any fiscal year in which the State does not permit the use of The Dwight D. Eisenhower System of Interstate and Defense Highways within its boundaries by vehicles with a weight of twenty thousand pounds carried on any one axle, including enforcement tolerances, or with a tandem axle weight of thirty-four thousand pounds, including enforcement tolerances, or a gross weight of at least eighty thousand pounds for vehicle combinations of five axles or more.
- (2) However, the maximum gross weight to be allowed by any State for vehicles using The Dwight D. Eisenhower System of Interstate and Defense Highways shall be twenty thousand pounds carried on one axle, including enforcement tolerances, and a tandem axle weight of thirty-four thousand pounds, including enforcement tolerances and with an overall maximum gross weight, including enforcement tolerances, on a group of two or more consecutive axles produced by application of the following formula:

$$W=500 \left(\frac{LN}{N-1} + 12N + 36 \right)$$

where W equals overall gross weight on any group of two or more consecutive axles to the nearest five hundred pounds, L equals distance in feet between the extreme of any group of two or more consecutive axles, and N equals number of axles in group under consideration, except that two consecutive sets of tandem axles may carry a gross load of thirty-four thousand pounds each providing the overall distance between the first and last axles of such consecutive sets of tandem axles (1) is thirty-six feet or more, or (2) in the case of a motor vehicle hauling any tank trailer, dump trailer, or ocean transport container before September 1, 1989, is 30 feet or more: Provided, That such overall gross weight may not exceed eighty thousand pounds, including all enforcement tolerances, except for vehicles using Interstate Route 29 between Sioux City, Iowa, and the border between Iowa and South Dakota or vehicles using Interstate Route 129 between Sioux City, Iowa, and the border between Iowa and Nebraska, and except for those vehicles and loads which cannot be easily dismantled or divided and which have been issued special permits in accordance with applicable State laws, or the corresponding maximum weights permitted for

vehicles using the public highways of such State under laws or regulations established by appropriate State authority in effect on July 1, 1956, except in the case of the overall gross weight of any group of two or more consecutive axles on any vehicle (other than a vehicle comprised of a motor vehicle hauling any tank trailer, dump trailer, or ocean transport container on or after September 1, 1989), on the date of enactment of the Federal-Aid Highway Amendments of 1974, whichever is the greater.

- (3) Any amount which is withheld from apportionment to any State pursuant to the foregoing provisions shall lapse if not released and obligated within the availability period specified in section 118(b).
- (4) This section shall not be construed to deny apportionment to any State allowing the operation within such State of any vehicles or combinations thereof, other than vehicles or combinations subject to subsection (d) of this section, which the State determines could be lawfully operated within such State on July 1, 1956, except in the case of the overall gross weight of any group of two or more consecutive axles, on the date of enactment of the Federal-Aid Highway Amendments of 1974.
- (5) With respect to the State of Hawaii, laws or regulations in effect on February 1, 1960, shall be applicable for the purposes of this section in lieu of those in effect on July 1, 1956.
- (6) With respect to the State of Colorado, vehicles designed to carry 2 or more precast concrete panels shall be considered a nondivisible load.
- (7) With respect to the State of Michigan, laws or regulations in effect on May 1, 1982, shall be applicable for the purposes of this subsection.
- (8) With respect to the State of Maryland, laws and regulations in effect on June 1, 1993, shall be applicable for the purposes of this subsection.
- (9) The State of Louisiana may allow, by special permit, the operation of vehicles with a gross vehicle weight of up to 100,000 pounds for the hauling of sugarcane during the harvest season, not to exceed 100 days annually.
- (10) With respect to Interstate Routes 89, 93, and 95 in the State of New Hampshire, State laws (including regulations) concerning vehicle weight limitations that were in effect on January 1, 1987, and are applicable to State highways other than the Interstate System, shall be applicable in lieu of the requirements of this subsection.
- (11)(A) With respect to all portions of the Interstate Highway System in the State of Maine, laws (including regulations) of that State concerning vehicle weight limitations applicable to other State highways shall be applicable in lieu of the requirements under this subsection.
(B) With respect to all portions of the Interstate Highway System in the State of Vermont, laws (including regulations) of that State concerning vehicle weight limitations applicable to other State highways shall be applicable in lieu of the requirements under this subsection.
- (12) Heavy duty vehicles.—
 - (A) In general.—Subject to subparagraphs (B) and (C), in order to promote reduction of fuel use and emissions because of engine idling, the maximum gross vehicle weight limit and the axle weight limit

for any heavy-duty vehicle equipped with an idle reduction technology shall be increased by a quantity necessary to compensate for the additional weight of the idle reduction system.

- (B) Maximum weight increase.—The weight increase under subparagraph (A) shall be not greater than 550 pounds.
 - (C) Proof.—On request by a regulatory agency or law enforcement agency, the vehicle operator shall provide proof (through demonstration or certification) that—
 - (i) the idle reduction technology is fully functional at all times; and
 - (ii) the 550-pound gross weight increase is not used for any purpose other than the use of idle reduction technology described in subparagraph (A).
- (13) Milk products.—A vehicle carrying fluid milk products shall be considered a load that cannot be easily dismantled or divided.
- (b) Reasonable Access.—No State may enact or enforce any law denying reasonable access to motor vehicles subject to this title to and from the Interstate Highway System to terminals and facilities for food, fuel, repairs, and rest.
 - (c) Ocean Transport Container Defined.—For purposes of this section, the term "ocean transport container" has the meaning given the term "freight container" by the International Standards Organization in Series 1, Freight Containers, 3rd Edition (reference number IS0668–1979(E)) as in effect on the date of the enactment of this subsection.
 - (d) Longer Combination Vehicles.—
 - (1) Prohibition.—
 - (A) General continuation rule.—A longer combination vehicle may continue to operate only if the longer combination vehicle configuration type was authorized by State officials pursuant to State statute or regulation conforming to this section and in actual lawful operation on a regular or periodic basis (including seasonal operations) on or before June 1, 1991, or pursuant to section 335 of the Department of Transportation and Related Agencies Appropriations Act, 1991 (104 Stat. 2186).
 - (B) Applicability of state laws and regulations.—All such operations shall continue to be subject to, at the minimum, all State statutes, regulations, limitations and conditions, including, but not limited to, routing-specific and configuration-specific designations and all other restrictions, in force on June 1, 1991; except that subject to such regulations as may be issued by the Secretary pursuant to paragraph (5) of this subsection, the State may make minor adjustments of a temporary and emergency nature to route designations and vehicle operating restrictions in effect on June 1, 1991, for specific safety purposes and road construction.
 - (C) Wyoming.—In addition to those vehicles allowed under subparagraph (A), the State of Wyoming may allow the operation of additional vehicle configurations not in actual operation on June 1, 1991, but authorized by State law not later than November 3, 1992, if such vehicle configurations comply with the single axle, tandem axle, and bridge formula limits set forth in subsection (a) and do not exceed 117,000 pounds gross vehicle weight.

- (D) Ohio.—In addition to vehicles which the State of Ohio may continue to allow to be operated under subparagraph (A), such State may allow longer combination vehicles with 3 cargo carrying units of 28½ feet each (not including the truck tractor) not in actual operation on June 1, 1991, to be operated within its boundaries on the 1-mile segment of Ohio State Route 7 which begins at and is south of exit 16 of the Ohio Turnpike.
 - (E) Alaska.—In addition to vehicles which the State of Alaska may continue to allow to be operated under subparagraph (A), such State may allow the operation of longer combination vehicles which were not in actual operation on June 1, 1991, but which were in actual operation prior to July 5, 1991.
 - (F) Iowa.—In addition to vehicles that the State of Iowa may continue to allow to be operated under subparagraph (A), the State may allow longer combination vehicles that were not in actual operation on June 1, 1991, to be operated on Interstate Route 29 between Sioux City, Iowa, and the border between Iowa and South Dakota or Interstate Route 129 between Sioux City, Iowa, and the border between Iowa and Nebraska.
- (2) Additional state restrictions.—
- (A) In general.—Nothing in this subsection shall prevent any State from further restricting in any manner or prohibiting the operation of longer combination vehicles otherwise authorized under this subsection; except that such restrictions or prohibitions shall be consistent with the requirements of sections 31111–31114 of title 49.
 - (B) Minor adjustments.—Any State further restricting or prohibiting the operations of longer combination vehicles or making minor adjustments of a temporary and emergency nature as may be allowed pursuant to regulations issued by the Secretary pursuant to paragraph (5) of this subsection, shall, within 30 days, advise the Secretary of such action, and the Secretary shall publish a notice of such action in the Federal Register.
- (3) Publication of list.—
- (A) Submission to secretary.—Within 60 days of the date of the enactment of this subsection, each State (i) shall submit to the Secretary for publication in the Federal Register a complete list of (I) all operations of longer combination vehicles being conducted as of June 1, 1991, pursuant to State statutes and regulations; (II) all limitations and conditions, including, but not limited to, routing-specific and configuration-specific designations and all other restrictions, governing the operation of longer combination vehicles otherwise prohibited under this subsection; and (III) such statutes, regulations, limitations, and conditions; and (ii) shall submit to the Secretary copies of such statutes, regulations, limitations, and conditions.
 - (B) Interim list.—Not later than 90 days after the date of the enactment of this subsection, the Secretary shall publish an interim list in the Federal Register, consisting of all information submitted pursuant to subparagraph (A). The Secretary shall review for accuracy all information submitted by the States pursuant to subparagraph (A) and shall solicit and consider public comment on the accuracy of all such information.

- (C) Limitation.—No statute or regulation shall be included on the list submitted by a State or published by the Secretary merely on the grounds that it authorized, or could have authorized, by permit or otherwise, the operation of longer combination vehicles, not in actual operation on a regular or periodic basis on or before June 1, 1991.
- (D) Final list.—Except as modified pursuant to paragraph (1)(C) of this subsection, the list shall be published as final in the Federal Register not later than 180 days after the date of the enactment of this subsection. In publishing the final list, the Secretary shall make any revisions necessary to correct inaccuracies identified under subparagraph (B). After publication of the final list, longer combination vehicles may not operate on the Interstate System except as provided in the list.
- (E) Review and correction procedure.—The Secretary, on his or her own motion or upon a request by any person (including a State), shall review the list issued by the Secretary pursuant to subparagraph (D). If the Secretary determines there is cause to believe that a mistake was made in the accuracy of the final list, the Secretary shall commence a proceeding to determine whether the list published pursuant to subparagraph (D) should be corrected. If the Secretary determines that there is a mistake in the accuracy of the list the Secretary shall correct the publication under subparagraph (D) to reflect the determination of the Secretary.
- (4) Longer combination vehicle defined.—For purposes of this section, the term "longer combination vehicle" means any combination of a truck tractor and 2 or more trailers or semitrailers which operates on the Interstate System at a gross vehicle weight greater than 80,000 pounds.
- (5) Regulations regarding minor adjustments.—Not later than 180 days after the date of the enactment of this subsection, the Secretary shall issue regulations establishing criteria for the States to follow in making minor adjustments under paragraph (1)(B).
- (e) Operation of Certain Specialized Hauling Vehicles on Interstate Route 68.—The single axle, tandem axle, and bridge formula limits set forth in subsection (a) shall not apply to the operation on Interstate Route 68 in Garrett and Allegany Counties, Maryland, of any specialized vehicle equipped with a steering axle and a tridem axle and used for hauling coal, logs, and pulpwood if such vehicle is of a type of vehicle as was operating in such counties on United States Route 40 or 48 for such purpose on August 1, 1991.
- (f) Operation of Certain Specialized Hauling Vehicles on Certain Wisconsin Highways.—If the 104-mile portion of Wisconsin State Route 78 and United States Route 51 between Interstate Route 94 near Portage, Wisconsin, and Wisconsin State Route 29 south of Wausau, Wisconsin, is designated as part of the Interstate System under section 103(c)(4)(A), the single axle weight, tandem axle weight, gross vehicle weight, and bridge formula limits set forth in subsection (a) shall not apply to the 104-mile portion with respect to the operation of any vehicle that could legally operate on the 104-mile portion before the date of the enactment of this subsection.
- (g) Operation of Certain Specialized Hauling Vehicles on Certain Pennsylvania Highways.—If the segment of United States Route 220 between Bedford and Bald Eagle, Pennsylvania, is designated as part of the Interstate System, the single axle weight, tandem axle weight, gross vehicle weight, and bridge formula limits set forth in

subsection (a) shall not apply to that segment with respect to the operation of any vehicle which could have legally operated on that segment before the date of the enactment of this subsection.

- (h) Waiver for a Route in State of Maine During Periods of National Emergency.—
 - (1) In general.—Notwithstanding any other provision of this section, the Secretary, in consultation with the Secretary of Defense, may waive or limit the application of any vehicle weight limit established under this section with respect to the portion of Interstate Route 95 in the State of Maine between Augusta and Bangor for the purpose of making bulk shipments of jet fuel to the Air National Guard Base at Bangor International Airport during a period of national emergency in order to respond to the effects of the national emergency.
 - (2) Applicability.—Emergency limits established under paragraph (1) shall preempt any inconsistent State vehicle weight limits.
- (i) Special Permits During Periods of National Emergency.—
 - (1) In general.—Notwithstanding any other provision of this section, a State may issue special permits during an emergency to overweight vehicles and loads that can easily be dismantled or divided if—
 - (A) the President has declared the emergency to be a major disaster under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.);
 - (B) the permits are issued in accordance with State law; and
 - (C) the permits are issued exclusively to vehicles and loads that are delivering relief supplies.
 - (2) Expiration.—A permit issued under paragraph (1) shall expire not later than 120 days after the date of the declaration of emergency under subparagraph (A) of that paragraph.
- (j) Operation of Vehicles on Certain Other Wisconsin Highways.—If any segment of the United States Route 41 corridor, as described in section 1105(c)(57) of the Intermodal Surface Transportation Efficiency Act of 1991, is designated as a route on the Interstate System, a vehicle that could operate legally on that segment before the date of such designation may continue to operate on that segment, without regard to any requirement under subsection (a).
- (k) Operation of Vehicles on Certain Mississippi Highways.—If any segment of United States Route 78 in Mississippi from mile marker 0 to mile marker 113 is designated as part of the Interstate System, no limit established under this section may apply to that segment with respect to the operation of any vehicle that could have legally operated on that segment before such designation.
- (l) Operation of Vehicles on Certain Kentucky Highways.—
 - (1) In general.—If any segment of highway described in paragraph (2) is designated as a route on the Interstate System, a vehicle that could operate legally on that segment before the date of such designation may continue to operate on that segment, without regard to any requirement under subsection (a).
 - (2) Description of highway segments.—The highway segments referred to in paragraph (1) are as follows:
 - (A) Interstate Route 69 in Kentucky (formerly the Wendell H. Ford (Western Kentucky) Parkway) from the Interstate Route 24 Interchange, near Eddyville, to the Edward T. Breathitt (Pennyrile) Parkway Interchange.

- (B) The Edward T. Breathitt (Pennyrile) Parkway (to be designated as Interstate Route 69) in Kentucky from the Wendell H. Ford (Western Kentucky) Parkway Interchange to near milepost 77, and on new alignment to an interchange on the Audubon Parkway, if the segment is designated as part of the Interstate System.
- (m) Covered Heavy-duty Tow and Recovery Vehicles.—
- (1) In general.—The vehicle weight limitations set forth in this section do not apply to a covered heavy-duty tow and recovery vehicle.
- (2) Covered heavy-duty tow and recovery vehicle defined.—In this subsection, the term "covered heavy-duty tow and recovery vehicle" means a vehicle that—
- (A) is transporting a disabled vehicle from the place where the vehicle became disabled to the nearest appropriate repair facility; and
- (B) has a gross vehicle weight that is equal to or exceeds the gross vehicle weight of the disabled vehicle being transported.
- (n) Operation of Vehicles on Certain Highways in the State of Texas.—If any segment in the State of Texas of United States Route 59, United States Route 77, United States Route 281, United States Route 84, Texas State Highway 44, or another roadway is designated as Interstate Route 69, a vehicle that could operate legally on that segment before the date of the designation may continue to operate on that segment, without regard to any requirement under this section.
- (o) Certain Logging Vehicles in the State of Wisconsin.—
- (1) In general.—The Secretary shall waive, with respect to a covered logging vehicle, the application of any vehicle weight limit established under this section.
- (2) Covered logging vehicle defined.—In this subsection, the term "covered logging vehicle" means a vehicle that—
- (A) is transporting raw or unfinished forest products, including logs, pulpwood, biomass, or wood chips;
- (B) has a gross vehicle weight of not more than 98,000 pounds;
- (C) has not less than 6 axles; and
- (D) is operating on a segment of Interstate Route 39 in the State of Wisconsin from mile marker 175.8 to mile marker 189.
- (p) Operation of Certain Specialized Vehicles on Certain Highways in the State of Arkansas.—If any segment of United States Route 63 between the exits for highways 14 and 75 in the State of Arkansas is designated as part of the Interstate System, the single axle weight, tandem axle weight, gross vehicle weight, and bridge formula limits under subsection (a) and the width limitation under section 31113(a) of title 49 shall not apply to that segment with respect to the operation of any vehicle that could operate legally on that segment before the date of the designation.
- (q) Certain Logging Vehicles in the State of Minnesota.—
- (1) In general.—The Secretary shall waive, with respect to a covered logging vehicle, the application of any vehicle weight limit established under this section.

- (2) Covered logging vehicle defined.—In this subsection, the term "covered logging vehicle" means a vehicle that—
- (A) is transporting raw or unfinished forest products, including logs, pulpwood, biomass, or wood chips;
 - (B) has a gross vehicle weight of not more than 99,000 pounds;
 - (C) has not less than 6 axles; and
 - (D) is operating on a segment of Interstate Route 35 in the State of Minnesota from mile marker 235.4 to mile marker 259.552.
- (r) Emergency Vehicles.—
- (1) In general.—Notwithstanding subsection (a), a State shall not enforce against an emergency vehicle a vehicle weight limit (up to a maximum gross vehicle weight of 86,000 pounds) of less than—
- (A) 24,000 pounds on a single steering axle;
 - (B) 33,500 pounds on a single drive axle;
 - (C) 62,000 pounds on a tandem axle; or
 - (D) 52,000 pounds on a tandem rear drive steer axle.
- (2) Emergency vehicle defined.—In this subsection, the term "emergency vehicle" means a vehicle designed to be used under emergency conditions—
- (A) to transport personnel and equipment; and
 - (B) to support the suppression of fires and mitigation of other hazardous situations.
- (s) Natural Gas Vehicles.—A vehicle, if operated by an engine fueled primarily by natural gas, may exceed any vehicle weight limit (up to a maximum gross vehicle weight of 82,000 pounds) under this section by an amount that is equal to the difference between—
- (1) the weight of the vehicle attributable to the natural gas tank and fueling system carried by that vehicle; and
 - (2) the weight of a comparable diesel tank and fueling system.
- (t) Vehicles in Idaho.—A vehicle limited or prohibited under this section from operating on a segment of the Interstate System in the State of Idaho may operate on such a segment if such vehicle—
- (1) has a gross vehicle weight of 129,000 pounds or less;
 - (2) other than gross vehicle weight, complies with the single axle, tandem axle, and bridge formula limits set forth in subsection (a); and
 - (3) is authorized to operate on such segment under Idaho State law.

42 U.S.C. § 5121. Congressional findings and declarations

- (a) The Congress hereby finds and declares that—
- (1) because disasters often cause loss of life, human suffering, loss of income, and property loss and damage; and
 - (2) because disasters often disrupt the normal functioning of governments and communities, and adversely affect individuals and families with great severity; special measures, designed to assist the efforts of the

affected States in expediting the rendering of aid, assistance, and emergency services, and the reconstruction and rehabilitation of devastated areas, are necessary.

- (b) It is the intent of the Congress, by this chapter, to provide an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out their responsibilities to alleviate the suffering and damage which result from such disasters by—
- (1) revising and broadening the scope of existing disaster relief programs;
 - (2) encouraging the development of comprehensive disaster preparedness and assistance plans, programs, capabilities, and organizations by the States and by local governments;
 - (3) achieving greater coordination and responsiveness of disaster preparedness and relief programs;
 - (4) encouraging individuals, States, and local governments to protect themselves by obtaining insurance coverage to supplement or replace governmental assistance;
 - (5) encouraging hazard mitigation measures to reduce losses from disasters, including development of land use and construction regulations; and
 - (6) providing Federal assistance programs for both public and private losses sustained in disasters.

49 U.S.C. § 31136. United States Government regulations

- (a) Minimum Safety Standards.—Subject to section 30103(a) of this title, the Secretary of Transportation shall prescribe regulations on commercial motor vehicle safety. The regulations shall prescribe minimum safety standards for commercial motor vehicles. At a minimum, the regulations shall ensure that—
- (1) commercial motor vehicles are maintained, equipped, loaded, and operated safely;
 - (2) the responsibilities imposed on operators of commercial motor vehicles do not impair their ability to operate the vehicles safely;
 - (3) the physical condition of operators of commercial motor vehicles is adequate to enable them to operate the vehicles safely and the periodic physical examinations required of such operators are performed by medical examiners who have received training in physical and medical examination standards and, after the national registry maintained by the Department of Transportation under section 31149(d) is established, are listed on such registry;
 - (4) the operation of commercial motor vehicles does not have a deleterious effect on the physical condition of the operators; and
 - (5) an operator of a commercial motor vehicle is not coerced by a motor carrier, shipper, receiver, or transportation intermediary to operate a commercial motor vehicle in violation of a regulation promulgated under this section, or chapter 51 or chapter 313 of this title.
- (b) Eliminating and Amending Existing Regulations.—The Secretary may not eliminate or amend an existing motor carrier safety regulation related only to the maintenance, equipment, loading, or operation (including routing) of vehicles carrying material found to be hazardous under section 5103 of this title until an equivalent or more stringent regulation has been prescribed under section 5103.
- (c) Procedures and Considerations.—

- (1) A regulation under this section shall be prescribed under section 553 of title 5 (without regard to sections 556 and 557 of title 5).
- (2) Before prescribing regulations under this section, the Secretary shall consider, to the extent practicable and consistent with the purposes of this chapter—
 - (A) costs and benefits; and
 - (B) State laws and regulations on commercial motor vehicle safety, to minimize their unnecessary preemption.
- (d) Effect of Existing Regulations.—If the Secretary does not prescribe regulations on commercial motor vehicle safety under this section, regulations on commercial motor vehicle safety prescribed by the Secretary before October 30, 1984, and in effect on October 30, 1984, shall be deemed in this subchapter to be regulations prescribed by the Secretary under this section.
- (e) Exemptions.—The Secretary may grant in accordance with section 31315 waivers and exemptions from, or conduct pilot programs with respect to, any regulations prescribed under this section.
- (f) Regulatory Impact Analysis.—
 - (1) In general.—Within each regulatory impact analysis of a proposed or final major rule issued by the Federal Motor Carrier Safety Administration, the Secretary shall, whenever practicable—
 - (A) consider the effects of the proposed or final rule on different segments of the motor carrier industry; and
 - (B) formulate estimates and findings based on the best available science.
 - (2) Scope.—To the extent feasible and appropriate, and consistent with law, an analysis described in paragraph (1) shall—
 - (A) use data that is representative of commercial motor vehicle operators or motor carriers, or both, that will be impacted by the proposed or final rule; and
 - (B) consider the effects on commercial truck and bus carriers of various sizes and types.
- (g) Public Participation.—
 - (1) In general.—If a proposed rule under this part is likely to lead to the promulgation of a major rule, the Secretary, before publishing such proposed rule, shall—
 - (A) issue an advance notice of proposed rulemaking; or
 - (B) proceed with a negotiated rulemaking.
 - (2) Requirements.—Each advance notice of proposed rulemaking issued under paragraph (1) shall—
 - (A) identify the need for a potential regulatory action;
 - (B) identify and request public comment on the best available science or technical information relevant to analyzing potential regulatory alternatives;
 - (C) request public comment on the available data and costs with respect to regulatory alternatives reasonably likely to be considered as part of the rulemaking; and
 - (D) request public comment on available alternatives to regulation.

- (3) Waiver.—This subsection does not apply to a proposed rule if the Secretary, for good cause, finds (and incorporates the finding and a brief statement of reasons for such finding in the proposed or final rule) that an advance notice of proposed rulemaking is impracticable, unnecessary, or contrary to the public interest.
- (h) Rule of Construction.—Nothing in subsection (f) or (g) may be construed to limit the contents of an advance notice of proposed rulemaking.

49 U.S.C. § 31141. Review and Preemption of State Laws and Regulations

- (a) Preemption After Decision.—A State may not enforce a State law or regulation on commercial motor vehicle safety that the Secretary of Transportation decides under this section may not be enforced.
- (b) Submission of Regulation.—A State receiving funds made available under section 31104 that enacts a State law or issues a regulation on commercial motor vehicle safety shall submit a copy of the law or regulation to the Secretary immediately after the enactment or issuance.
- (c) Review and Decisions by Secretary.—
 - (1) Review.—The Secretary shall review State laws and regulations on commercial motor vehicle safety. The Secretary shall decide whether the State law or regulation—
 - (A) has the same effect as a regulation prescribed by the Secretary under section 31136;
 - (B) is less stringent than such regulation; or
 - (C) is additional to or more stringent than such regulation.
 - (2) Regulations with same effect.—If the Secretary decides a State law or regulation has the same effect as a regulation prescribed by the Secretary under section 31136 of this title, the State law or regulation may be enforced.
 - (3) Less stringent regulations.—If the Secretary decides a State law or regulation is less stringent than a regulation prescribed by the Secretary under section 31136 of this title, the State law or regulation may not be enforced.
 - (4) Additional or more stringent regulations.—If the Secretary decides a State law or regulation is additional to or more stringent than a regulation prescribed by the Secretary under section 31136 of this title, the State law or regulation may be enforced unless the Secretary also decides that—
 - (A) the State law or regulation has no safety benefit;
 - (B) the State law or regulation is incompatible with the regulation prescribed by the Secretary; or
 - (C) enforcement of the State law or regulation would cause an unreasonable burden on interstate commerce.
 - (5) Consideration of effect on interstate commerce.—In deciding under paragraph (4) whether a State law or regulation will cause an unreasonable burden on interstate commerce, the Secretary may consider the effect on interstate commerce of implementation of that law or regulation with the implementation of all similar laws and regulations of other States.
- (d) Waivers.—

- (1) A person (including a State) may petition the Secretary for a waiver of a decision of the Secretary that a State law or regulation may not be enforced under this section. The Secretary shall grant the waiver, as expeditiously as possible, if the person demonstrates to the satisfaction of the Secretary that the waiver is consistent with the public interest and the safe operation of commercial motor vehicles.
 - (2) Before deciding whether to grant or deny a petition for a waiver under this subsection, the Secretary shall give the petitioner an opportunity for a hearing on the record.
- (e) **Written Notice of Decisions.**—Not later than 10 days after making a decision under subsection (c) of this section that a State law or regulation may not be enforced, the Secretary shall give written notice to the State of that decision.
- (f) **Judicial Review and Venue.**—
- (1) Not later than 60 days after the Secretary makes a decision under subsection (c) of this section, or grants or denies a petition for a waiver under subsection (d) of this section, a person (including a State) adversely affected by the decision, grant, or denial may file a petition for judicial review. The petition may be filed in the court of appeals of the United States for the District of Columbia Circuit or in the court of appeals of the United States for the circuit in which the person resides or has its principal place of business.
 - (2) The court has jurisdiction to review the decision, grant, or denial and to grant appropriate relief, including interim relief, as provided in chapter 7 of title 5.
 - (3) A judgment of a court under this subsection may be reviewed only by the Supreme Court under section 1254 of title 28.
 - (4) The remedies provided for in this subsection are in addition to other remedies provided by law.
- (g) **Initiating Review Proceedings.**—To review a State law or regulation on commercial motor vehicle safety under this section, the Secretary may initiate a regulatory proceeding on the Secretary's own initiative or on petition of an interested person (including a State).

Definitions

A.R.S. § 1-242. Standard time.

- A. The standard time in Arizona shall be the solar time of the one hundred fifth meridian west of Greenwich, commonly known as standard mountain time.
- B. This section shall not be construed to affect the standard time established by United States law governing the movements of common carriers engaged in interstate commerce or the time for performance of an act by an officer or department of the United States, as established by a statute, lawful order, rule or regulation of the United States or an agency thereof.
- C. Notwithstanding any other provision of law to the contrary by the United States government relating to adoption of daylight saving time by all of the states, the state of Arizona elects to reject such time and elects to continue in force the terms of subsection A, relating to standard time in Arizona.
- D. The rejection of daylight saving time as provided for in this section may be changed by future legislative action.

A.R.S. § 1-301. Holidays enumerated.

- A. The following days shall be holidays:
 - 1. Sunday of each week.
 - 2. January 1, "New Year's Day".
 - 3. Third Monday in January, "Martin Luther King, Jr./Civil Rights Day".
 - 4. Third Monday in February, "Lincoln/Washington Presidents' Day".
 - 5. Second Sunday in May, "Mothers' Day".
 - 6. Last Monday in May, "Memorial Day".
 - 7. Third Sunday in June, "Fathers' Day".
 - 8. July 4, "Independence Day".
 - 9. First Sunday in August, "American Family Day".
 - 10. First Monday in September, "Labor Day".
 - 11. September 17, "Constitution Commemoration Day".
 - 12. Second Monday in October, "Columbus Day".
 - 13. November 11, "Veterans' Day".
 - 14. Fourth Thursday in November, "Thanksgiving Day".
 - 15. December 25, "Christmas Day".
- B. When any of the holidays enumerated in subsection A falls on a Sunday, the following Monday shall be observed as a holiday, with the exception of the holidays enumerated in subsection A, paragraphs 1, 5, 7, 9 and 11.
- C. When any of the holidays enumerated in subsection A, paragraphs 2, 8, 13 and 15 falls on a Saturday, the preceding Friday shall be observed as a holiday.
- D. When the holiday enumerated in subsection A, paragraph 11 falls on a day other than Sunday, the Sunday preceding September 17 shall be observed as such holiday.

A.R.S. § 3-3401. Definitions.

In this chapter, unless the context otherwise requires:

1. "Area A" has the same meaning prescribed in section 49-541.
2. "Area B" has the same meaning prescribed in section 49-541.
3. "Area C" means that portion of Pinal county lying west of range 11 east, excluding that portion of the county lying within area A as defined in section 49-541 and that portion of the county within the jurisdiction of any Indian tribe, band, group or community that is recognized by the United States secretary of the interior and that exercises governmental authority within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent and including rights-of-way running through the reservation.
4. "Associate director" means the associate director of the division.
5. "Biodiesel" means a mono-alkyl ester that meets ASTM D6751.
6. "Biodiesel blend" means a motor fuel that is composed of biodiesel and diesel fuel and that is designated by the letter "B", followed by the numeric value of the volume percentage of biodiesel in the blend.
7. "Biofuel" means a solid, liquid or gaseous fuel that is derived from biomass and that can be used directly for heating or power or as a blend component in motor fuel.
8. "Biofuel blend" means a motor fuel that is composed of a biofuel, that is combined with a petroleum-based fuel and that is designated by the volume percentage of biofuel in the blend.
9. "Biomass" means biological material, such as plant or animal matter, excluding organic material that has been transformed by geological processes into substances such as coal or petroleum or derivatives thereof, that may be transformed into biofuel.
10. "Biomass-based diesel" means a diesel fuel substitute produced from nonpetroleum renewable resources that meets the registration requirements for fuels and fuel additives established by the United States environmental protection agency under 42 United States Code 7545 and includes fuel derived from animal wastes, including poultry wastes and other waste materials, municipal solid waste and sludge and oil derived from wastewater and the treatment of wastewater. Biomass-based diesel does not include biodiesel.
11. "Biomass-based diesel blend" means a blend of petroleum-based diesel fuel with biomass-based diesel.
12. "Certification" means the process of determining the accuracy of a commercial device to the standards of this state by a registered service representative or the division.
13. "Commercial device" means any weighing, measuring, metering or counting device that is used to determine the direct cost of things sold or offered or exposed for sale, or used to establish a fee for service if the cost is based on weight, measure or count, except that it does not include those devices used for in-house packaging, inventory control or law enforcement purposes.
14. "Commodity" means any merchandise, product or substance produced or distributed for sale to or use by others.

15. "Correct" as used in connection with weights and measures means conformance to all applicable requirements of this chapter.
16. "Diesel fuel" means a refined middle distillate that is used as a fuel in a compression-ignition internal combustion engine and that meets the specifications of ASTM D975.
17. "Division" means the weights and measures services division of the department.
18. "Ethanol flex fuel" means a fuel ethanol gasoline blend that meets the specifications of ASTM D5798 standard specification for ethanol fuel blends for flexible-fuel automotive spark-ignition engines.
19. "Fleet owner" means a registered owner or lessee of at least twenty-five vehicles.
20. "Gasoline" means a volatile, highly flammable liquid mixture of hydrocarbons that does not contain more than five one-hundredths grams of lead for each United States gallon, that is produced, refined, manufactured, blended, distilled or compounded from petroleum, natural gas, oil, shale oils or coal and other flammable liquids free from undissolved water, sediment or suspended matter, with or without additives, and that is commonly used as a fuel for spark-ignition internal combustion engines. Gasoline does not include diesel fuel or ethanol flex fuel.
21. "Gasoline provider" means any manufacturer of gasoline or any person who imports gasoline into a vehicle emissions control area by means of a pipeline or in truckload quantities for the person's own use within the vehicle emissions control area or any person who sells gasoline intended for ultimate consumption within a vehicle emissions control area. Gasoline provider does not mean a person with respect to a gasoline supplied or sold by the person to another person for resale to a retailer within a vehicle emissions control area or to a fleet owner for consumption within a vehicle emissions control area.
22. "Inspector" means a state official of the division.
23. "Liquid measuring device" means any meter, pump, tank, gauge or apparatus used for volumetrically determining the quantity of any internal combustion engine fuel, liquefied petroleum gas or low viscosity heating oil.
24. "Manufacturer's proving ground" means a facility whose sole purpose is to develop complete advanced vehicles for an automotive manufacturer.
25. "Misfuel" means the act of dispensing into the fuel tank of a motor vehicle a motor fuel that was not intended to be used in the engine of that motor vehicle.
26. "Motor fuel" means a petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, number one or number two diesel fuel or any grade of oxygenated gasoline typically used in the operation of a motor engine, including biodiesel blends, biofuel blends and ethanol flex fuels.
27. "Motor vehicle racing event" means a race that uses unlicensed vehicles designed and manufactured specifically for racing purposes and that is conducted on a public or private racecourse for the entertainment of the general public. Motor vehicle racing event includes practice, qualifying and demonstration laps conducted as part of the activities related to a motor vehicle race.
28. "Oxygenate" means any oxygen-containing ashless, organic compound, including aliphatic alcohols and aliphatic ethers, that may be used as a fuel or as a gasoline blending component and that is approved as a

blending agent under the provisions of a waiver issued by the United States environmental protection agency pursuant to 42 United States Code section 7545(f).

29. "Oxygenated fuel" means an unleaded motor fuel blend that consists primarily of gasoline and at least one and one-half percent by weight of one or more oxygenates and that has been blended consistent with the provisions of a waiver issued by the United States environmental protection agency pursuant to 42 United States Code section 7545(f).
30. "Package" means any commodity enclosed in a container or wrapped in any manner in advance of sale in units suitable for either wholesale or retail trade.
31. "Person" means both the plural and the singular, as the case demands, and includes individuals, partnerships, corporations, companies, societies and associations.
32. "Product transfer document" means any bill of lading, loading ticket, manifest, delivery receipt, invoice or other documentation used on any occasion when a person transfers custody or title of motor fuel other than when motor fuel is sold or dispensed at a service station or fleet vehicle fueling facility.
33. "Public weighmaster" means any person who is engaged in any of the following:
 - (a) The business of weighing any object or thing for the public generally for hire or for internal use and issuing for that weighing a weight certificate intended to be accepted as an accurate weight on which a purchase or sale is to be based or on which a service fee is to be charged.
 - (b) The business of weighing for-hire motor vehicles, trailers or semitrailers and issuing weight certificates intended to be accepted as an accurate weight for the purpose of determining the amount of any tax, fee or other assessment on the vehicles.
34. "Reference standards" means the physical standards of the state that serve as the legal reference from which all other standards and weights and measures are derived.
35. "Registered service agency" means any agency, firm, company or corporation that for hire, award, commission or any other payment of any kind installs, services, repairs or reconditions a commercial device or tests or repairs vapor recovery systems or vapor recovery components and that has been issued a license by the division.
36. "Registered service representative" means any individual who for hire, award, commission or any other payment of any kind installs, services, repairs or reconditions a commercial device or tests or repairs vapor recovery systems or vapor recovery components and who has been issued a license by the division.
37. "Retail seller" means a person whose business purpose is to sell, expose or offer for sale or use any package or commodity by weight, measure or count.
38. "Secondary standards" means the physical standards that are traceable to the reference standards through comparisons, using acceptable laboratory procedures, and that are used in the enforcement of weights and measures laws and rules.
39. "Supplier" means any person that imports gasoline into a vehicle emissions control area by means of a pipeline or in truckload quantities for the person's own use within the vehicle emissions control area or any person that sells gasoline intended for ultimate consumption within a vehicle emissions control area, except

that supplier does not mean a person with respect to gasoline supplied or sold by the person to another for resale to a retailer within a vehicle emissions control area or to a fleet owner for consumption within a vehicle emissions control area.

40. "Vehicle emissions control area" means a county with a population of one million two hundred thousand or more persons and any portion of a county contained in area A, or any portion of area B or C, except that such an area does not include a manufacturer's proving ground that is located in the vehicle emissions control area.
41. "Weight" as used in connection with any commodity means net weight.
42. "Weights" or "measures", or both, means all weights, measures, meters or counters of every kind, instruments and devices for weighing, measuring, metering or counting and any appliance and accessories associated with any or all such instruments and devices.

A.R.S. § 28-101. Definitions.

In this title, unless the context otherwise requires:

1. "Alcohol" means any substance containing any form of alcohol, including ethanol, methanol, propynol and isopropynol.
2. "Alcohol concentration" if expressed as a percentage means either:
 - (a) The number of grams of alcohol per one hundred milliliters of blood.
 - (b) The number of grams of alcohol per two hundred ten liters of breath.
3. "All-terrain vehicle" means either of the following:
 - (a) A motor vehicle that satisfies all of the following:
 - (i) Is designed primarily for recreational nonhighway all-terrain travel.
 - (ii) Is fifty or fewer inches in width.
 - (iii) Has an unladen weight of one thousand two hundred pounds or less.
 - (iv) Travels on three or more nonhighway tires.
 - (v) Is operated on a public highway.
 - (b) A recreational off-highway vehicle that satisfies all of the following:
 - (i) Is designed primarily for recreational nonhighway all-terrain travel.
 - (ii) Is sixty-five or fewer inches in width.
 - (iii) Has an unladen weight of one thousand eight hundred pounds or less.
 - (iv) Travels on four or more nonhighway tires.
4. "Authorized emergency vehicle" means any of the following:
 - (a) A fire department vehicle.
 - (b) A police vehicle.
 - (c) An ambulance or emergency vehicle of a municipal department or public service corporation that is designated or authorized by the department or a local authority.

- (d) Any other ambulance, fire truck or rescue vehicle that is authorized by the department in its sole discretion and that meets liability insurance requirements prescribed by the department.
5. "Autocycle" means a three-wheeled motorcycle on which the driver and passengers ride in a fully or partially enclosed seating area that is equipped with a roll cage, safety belts for each occupant and antilock brakes and that is designed to be controlled with a steering wheel and pedals.
 6. "Aviation fuel" means all flammable liquids composed of a mixture of selected hydrocarbons expressly manufactured and blended for the purpose of effectively and efficiently operating an internal combustion engine for use in an aircraft but does not include fuel for jet or turbine powered aircraft.
 7. "Bicycle" means a device, including a racing wheelchair, that is propelled by human power and on which a person may ride and that has either:
 - (a) Two tandem wheels, either of which is more than sixteen inches in diameter.
 - (b) Three wheels in contact with the ground, any of which is more than sixteen inches in diameter.
 8. "Board" means the transportation board.
 9. "Bus" means a motor vehicle designed for carrying sixteen or more passengers, including the driver.
 10. "Business district" means the territory contiguous to and including a highway if there are buildings in use for business or industrial purposes within any six hundred feet along the highway, including hotels, banks or office buildings, railroad stations and public buildings that occupy at least three hundred feet of frontage on one side or three hundred feet collectively on both sides of the highway.
 11. "Certificate of ownership" means a paper or an electronic record that is issued in another state or a foreign jurisdiction and that indicates ownership of a vehicle.
 12. "Certificate of title" means a paper document or an electronic record that is issued by the department and that indicates ownership of a vehicle.
 13. "Combination of vehicles" means a truck or truck tractor and semitrailer and any trailer that it tows but does not include a forklift designed for the purpose of loading or unloading the truck, trailer or semitrailer.
 14. "Controlled substance" means a substance so classified under section 102(6) of the controlled substances act (21 United States Code section 802(6)) and includes all substances listed in schedules I through V of 21 Code of Federal Regulations part 1308.
 15. "Conviction" means:
 - (a) An unvacated adjudication of guilt or a determination that a person violated or failed to comply with the law in a court of original jurisdiction or by an authorized administrative tribunal.
 - (b) An unvacated forfeiture of bail or collateral deposited to secure the person's appearance in court.
 - (c) A plea of guilty or no contest accepted by the court.
 - (d) The payment of a fine or court costs.
 16. "County highway" means a public road that is constructed and maintained by a county.
 17. "Dealer" means a person who is engaged in the business of buying, selling or exchanging motor vehicles, trailers or semitrailers and who has an established place of business and has paid fees pursuant to section 28-4302.

18. "Department" means the department of transportation acting directly or through its duly authorized officers and agents.
19. "Digital network or software application" has the same meaning prescribed in section 28-9551.
20. "Director" means the director of the department of transportation.
21. "Drive" means to operate or be in actual physical control of a motor vehicle.
22. "Driver" means a person who drives or is in actual physical control of a vehicle.
23. "Driver license" means a license that is issued by a state to an individual and that authorizes the individual to drive a motor vehicle.
24. "Electric personal assistive mobility device" means a self-balancing device with one wheel or two nontandem wheels and an electric propulsion system that limits the maximum speed of the device to fifteen miles per hour or less and that is designed to transport only one person.
25. "Farm" means any lands primarily used for agriculture production.
26. "Farm tractor" means a motor vehicle designed and used primarily as a farm implement for drawing implements of husbandry.
27. "Foreign vehicle" means a motor vehicle, trailer or semitrailer that is brought into this state other than in the ordinary course of business by or through a manufacturer or dealer and that has not been registered in this state.
28. "Golf cart" means a motor vehicle that has not less than three wheels in contact with the ground, that has an unladen weight of less than one thousand eight hundred pounds, that is designed to be and is operated at not more than twenty-five miles per hour and that is designed to carry not more than four persons including the driver.
29. "Hazardous material" means a material, and its mixtures or solutions, that the United States department of transportation determines under 49 Code of Federal Regulations is, or any quantity of a material listed as a select agent or toxin under 42 Code of Federal Regulations part 73 that is, capable of posing an unreasonable risk to health, safety and property if transported in commerce and that is required to be placarded or marked as required by the department's safety rules prescribed pursuant to chapter 14 of this title.
30. "Implement of husbandry" means a vehicle that is designed primarily for agricultural purposes and that is used exclusively in the conduct of agricultural operations, including an implement or vehicle whether self-propelled or otherwise that meets both of the following conditions:
 - (a) Is used solely for agricultural purposes including the preparation or harvesting of cotton, alfalfa, grains and other farm crops.
 - (b) Is only incidentally operated or moved on a highway whether as a trailer or self-propelled unit. For the purposes of this subdivision, "incidentally operated or moved on a highway" means travel between a farm and another part of the same farm, from one farm to another farm or between a farm and a place of repair, supply or storage.

31. "Limousine" means a motor vehicle providing prearranged ground transportation service for an individual passenger, or a group of passengers, that is arranged in advance or is operated on a regular route or between specified points and includes ground transportation under a contract or agreement for services that includes a fixed rate or time and is provided in a motor vehicle with a seating capacity not exceeding fifteen passengers including the driver.
32. "Livery vehicle" means a motor vehicle that:
- (a) Has a seating capacity not exceeding fifteen passengers including the driver.
 - (b) Provides passenger services for a fare determined by a flat rate or flat hourly rate between geographic zones or within a geographic area.
 - (c) Is available for hire on an exclusive or shared ride basis.
 - (d) May do any of the following:
 - (i) Operate on a regular route or between specified places.
 - (ii) Offer prearranged ground transportation service as defined in section 28-141.
 - (iii) Offer on demand ground transportation service pursuant to a contract with a public airport, licensed business entity or organization.
33. "Local authority" means any county, municipal or other local board or body exercising jurisdiction over highways under the constitution and laws of this state.
34. "Manufacturer" means a person engaged in the business of manufacturing motor vehicles, trailers or semitrailers.
35. "Moped" means a bicycle that is equipped with a helper motor if the vehicle has a maximum piston displacement of fifty cubic centimeters or less, a brake horsepower of one and one-half or less and a maximum speed of twenty-five miles per hour or less on a flat surface with less than a one percent grade.
36. "Motor driven cycle" means a motorcycle, including every motor scooter, with a motor that produces not more than five horsepower.
37. "Motor vehicle":
- (a) Means either:
 - (i) A self-propelled vehicle.
 - (ii) For the purposes of the laws relating to the imposition of a tax on motor vehicle fuel, a vehicle that is operated on the highways of this state and that is propelled by the use of motor vehicle fuel.
 - (b) Does not include a motorized wheelchair, an electric personal assistive mobility device or a motorized skateboard. For the purposes of this subdivision:
 - (i) "Motorized skateboard" means a self-propelled device that has a motor, a deck on which a person may ride and at least two tandem wheels in contact with the ground.
 - (ii) "Motorized wheelchair" means a self-propelled wheelchair that is used by a person for mobility.
38. "Motor vehicle fuel" includes all products that are commonly or commercially known or sold as gasoline, including casinghead gasoline, natural gasoline and all flammable liquids, and that are composed of a mixture of selected hydrocarbons expressly manufactured and blended for the purpose of effectively and

efficiently operating internal combustion engines. Motor vehicle fuel does not include inflammable liquids that are specifically manufactured for racing motor vehicles and that are distributed for and used by racing motor vehicles at a racetrack, use fuel as defined in section 28-5601, aviation fuel, fuel for jet or turbine powered aircraft or the mixture created at the interface of two different substances being transported through a pipeline, commonly known as transmix.

39. "Motorcycle" means a motor vehicle that has a seat or saddle for the use of the rider and that is designed to travel on not more than three wheels in contact with the ground but excludes a tractor and a moped.
40. "Motorized quadricycle" means a self-propelled motor vehicle to which all of the following apply:
- (a) The vehicle is self-propelled by an emission-free electric motor and may include pedals operated by the passengers.
 - (b) The vehicle has at least four wheels in contact with the ground.
 - (c) The vehicle seats at least eight passengers, including the driver.
 - (d) The vehicle is operable on a flat surface using solely the electric motor without assistance from the pedals or passengers.
 - (e) The vehicle is a commercial motor vehicle as defined in section 28-5201.
 - (f) The vehicle is a limousine operating under a vehicle for hire company permit issued pursuant to section 28-9503.
 - (g) The vehicle is manufactured by a motor vehicle manufacturer that is licensed pursuant to chapter 10 of this title.
 - (h) The vehicle complies with the definition and standards for low-speed vehicles set forth in federal motor vehicle safety standard 500 and 49 Code of Federal Regulations sections 571.3(b) and 571.500, respectively.
41. "Neighborhood electric vehicle" means a self-propelled electrically powered motor vehicle to which all of the following apply:
- (a) The vehicle is emission free.
 - (b) The vehicle has at least four wheels in contact with the ground.
 - (c) The vehicle complies with the definition and standards for low-speed vehicles set forth in federal motor vehicle safety standard 500 and 49 Code of Federal Regulations sections 571.3(b) and 571.500, respectively.
42. "Nonresident" means a person who is not a resident of this state as defined in section 28-2001.
43. "Off-road recreational motor vehicle" means a motor vehicle that is designed primarily for recreational nonhighway all-terrain travel and that is not operated on a public highway. Off-road recreational motor vehicle does not mean a motor vehicle used for construction, building trade, mining or agricultural purposes.
44. "Operator" means a person who drives a motor vehicle on a highway, who is in actual physical control of a motor vehicle on a highway or who is exercising control over or steering a vehicle being towed by a motor vehicle.

45. "Owner" means:
- (a) A person who holds the legal title of a vehicle.
 - (b) If a vehicle is the subject of an agreement for the conditional sale or lease with the right of purchase on performance of the conditions stated in the agreement and with an immediate right of possession vested in the conditional vendee or lessee, the conditional vendee or lessee.
 - (c) If a mortgagor of a vehicle is entitled to possession of the vehicle, the mortgagor.
46. "Pedestrian" means any person afoot. A person who uses an electric personal assistive mobility device or a manual or motorized wheelchair is considered a pedestrian unless the manual wheelchair qualifies as a bicycle. For the purposes of this paragraph, "motorized wheelchair" means a self-propelled wheelchair that is used by a person for mobility.
47. "Power sweeper" means an implement, with or without motive power, that is only incidentally operated or moved on a street or highway and that is designed for the removal of debris, dirt, gravel, litter or sand whether by broom, vacuum or regenerative air system from asphaltic concrete or cement concrete surfaces, including parking lots, highways, streets and warehouses, and a vehicle on which the implement is permanently mounted.
48. "Public transit" means the transportation of passengers on scheduled routes by means of a conveyance on an individual passenger fare-paying basis excluding transportation by a sightseeing bus, school bus or taxi or a vehicle not operated on a scheduled route basis.
49. "Reconstructed vehicle" means a vehicle that has been assembled or constructed largely by means of essential parts, new or used, derived from vehicles or makes of vehicles of various names, models and types or that, if originally otherwise constructed, has been materially altered by the removal of essential parts or by the addition or substitution of essential parts, new or used, derived from other vehicles or makes of vehicles. For the purposes of this paragraph, "essential parts" means integral and body parts, the removal, alteration or substitution of which will tend to conceal the identity or substantially alter the appearance of the vehicle.
50. "Residence district" means the territory contiguous to and including a highway not comprising a business district if the property on the highway for a distance of three hundred feet or more is in the main improved with residences or residences and buildings in use for business.
51. "Right-of-way" when used within the context of the regulation of the movement of traffic on a highway means the privilege of the immediate use of the highway. Right-of-way when used within the context of the real property on which transportation facilities and appurtenances to the facilities are constructed or maintained means the lands or interest in lands within the right-of-way boundaries.
52. "School bus" means a motor vehicle that is designed for carrying more than ten passengers and that is either:
- (a) Owned by any public or governmental agency or other institution and operated for the transportation of children to or from home or school on a regularly scheduled basis.

- (b) Privately owned and operated for compensation for the transportation of children to or from home or school on a regularly scheduled basis.
53. "Semitrailer" means a vehicle that is with or without motive power, other than a pole trailer, that is designed for carrying persons or property and for being drawn by a motor vehicle and that is constructed so that some part of its weight and that of its load rests on or is carried by another vehicle. For the purposes of this paragraph, "pole trailer" has the same meaning prescribed in section 28-601.
54. "State" means a state of the United States and the District of Columbia.
55. "State highway" means a state route or portion of a state route that is accepted and designated by the board as a state highway and that is maintained by the state.
56. "State route" means a right-of-way whether actually used as a highway or not that is designated by the board as a location for the construction of a state highway.
57. "Street" or "highway" means the entire width between the boundary lines of every way if a part of the way is open to the use of the public for purposes of vehicular travel.
58. "Taxi" means a motor vehicle that has a seating capacity not exceeding fifteen passengers, including the driver, that provides passenger services and that:
- (a) Does not primarily operate on a regular route or between specified places.
 - (b) Offers local transportation for a fare determined on the basis of the distance traveled or prearranged ground transportation service as defined in section 28-141 for a predetermined fare.
59. "Title transfer form" means a paper or an electronic form that is prescribed by the department for the purpose of transferring a certificate of title from one owner to another owner.
60. "Traffic survival school" means a school that offers educational sessions to drivers who are required to attend and successfully complete educational sessions pursuant to this title that are designed to improve the safety and habits of drivers and that are approved by the department.
61. "Trailer" means a vehicle that is with or without motive power, other than a pole trailer, that is designed for carrying persons or property and for being drawn by a motor vehicle and that is constructed so that no part of its weight rests on the towing vehicle. A semitrailer equipped with an auxiliary front axle commonly known as a dolly is deemed to be a trailer. For the purposes of this paragraph, "pole trailer" has the same meaning prescribed in section 28-601.
62. "Transportation network company" has the same meaning prescribed in section 28-9551.
63. "Transportation network company vehicle" has the same meaning prescribed in section 28-9551.
64. "Transportation network service" has the same meaning prescribed in section 28-9551.
65. "Truck" means a motor vehicle designed or used primarily for the carrying of property other than the effects of the driver or passengers and includes a motor vehicle to which has been added a box, a platform or other equipment for such carrying.
66. "Truck tractor" means a motor vehicle that is designed and used primarily for drawing other vehicles and that is not constructed to carry a load other than a part of the weight of the vehicle and load drawn.

67. "Vehicle" means a device in, on or by which a person or property is or may be transported or drawn on a public highway, excluding devices moved by human power or used exclusively on stationary rails or tracks.
68. "Vehicle transporter" means either:
- (a) A truck tractor capable of carrying a load and drawing a semitrailer.
 - (b) A truck tractor with a stinger-steered fifth wheel capable of carrying a load and drawing a semitrailer or a truck tractor with a dolly mounted fifth wheel that is securely fastened to the truck tractor at two or more points and that is capable of carrying a load and drawing a semitrailer.

A.R.S. § 28-601. Definitions.

In this chapter, unless the context otherwise requires:

1. "Commercial motor vehicle" means a motor vehicle or combination of vehicles that is designed, used or maintained to transport passengers or property in the furtherance of a commercial enterprise, that is a commercial motor vehicle as defined in section 28-5201 and that is not exempt from gross weight fees as prescribed in section 28-5432, subsection B.
2. "Controlled access highway" means a highway, street or roadway to or from which owners or occupants of abutting lands and other persons have no legal right of access except at such points only and in the manner determined by the public authority that has jurisdiction over the highway, street or roadway.
3. "Crosswalk" means:
 - (a) That part of a roadway at an intersection included within the prolongations or connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in absence of curbs, from the edges of the traversable roadway.
 - (b) Any portion of a roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing by lines or other markings on the surface.
4. "Escort vehicle" means a vehicle that is required pursuant to rules adopted by the department to escort motor vehicles or combinations of vehicles that require issuance of a permit pursuant to article 18 or 19 of this chapter for operation on the highways of this state.
5. "Explosives" means any chemical compound, mixture or device that is commonly used or intended for the purpose of producing an explosion and that is defined in 49 Code of Federal Regulations part 173.
6. "Flammable liquid" means any liquid that has a flash point of less than one hundred degrees Fahrenheit and that is defined in 49 Code of Federal Regulations section 173.120.
7. "Gross weight" means the weight of a vehicle without a load plus the weight of any load on the vehicle.
8. "Intersection" means the area embraced within the prolongation or connection of the lateral curb lines, or if none, the lateral boundary lines of the roadways of two highways that join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways joining at any other angle may come in conflict. If a highway includes two roadways thirty or more feet apart, each crossing of each roadway of the divided highway by an intersecting highway is a separate intersection. If the intersecting

highway also includes two roadways thirty or more feet apart, each crossing of two roadways of the highways is a separate intersection.

9. "License" means any license, temporary instruction permit or temporary license issued under the laws of this state or any other state that pertain to the licensing of persons to operate motor vehicles.
10. "Low emission and energy efficient vehicle" means a vehicle that has been certified by the United States environmental protection agency administrator in accordance with 23 United States Code section 166 or that is part of a federally approved pilot program.
11. "Motorized wheelchair" means any self-propelled wheelchair that is used by a person for mobility.
12. "Official traffic control device" means any sign, signal, marking or device that is not inconsistent with this chapter and that is placed or erected by authority of a public body or official having jurisdiction for the purpose of regulating, warning or guiding traffic.
13. "Park", if prohibited, means the standing of a vehicle, whether occupied or not, otherwise than temporarily for the purpose of and while actually engaged in loading or unloading.
14. "Photo enforcement system" means a device substantially consisting of a radar unit or sensor linked to a camera or other recording device that produces one or more photographs, microphotographs, videotapes or digital or other recorded images of a vehicle's license plate for the purpose of identifying violators of articles 3 and 6 of this chapter.
15. "Pneumatic tire" means a tire in which compressed air is designed to support the load.
16. "Pole trailer" means a vehicle that is all of the following:
 - (a) Without motive power.
 - (b) Designed to be drawn by another vehicle and attached to the towing vehicle by means of a reach or pole or by being boomed or otherwise secured to the towing vehicle.
 - (c) Used ordinarily for transporting long or irregularly shaped loads such as poles, pipes or structural members capable generally of sustaining themselves as beams between the supporting connections.
17. "Police officer" means an officer authorized to direct or regulate traffic or make arrests for violations of traffic rules or other offenses.
18. "Private road or driveway" means a way or place that is in private ownership and that is used for vehicular travel by the owner and those persons who have express or implied permission from the owner but not by other persons.
19. "Railroad" means a carrier of persons or property on cars operated on stationary rails.
20. "Railroad sign or signal" means a sign, signal or device erected by authority of a public body or official or by a railroad and intended to give notice of the presence of railroad tracks or the approach of a railroad train.
21. "Railroad train" means a steam engine or any electric or other motor that is with or without cars coupled to the steam engine or electric or other motor and that is operated on rails.

22. "Roadway" means that portion of a highway that is improved, designed or ordinarily used for vehicular travel, exclusive of the berm or shoulder. If a highway includes two or more separate roadways, roadway refers to any such roadway separately but not to all such roadways collectively.
23. "Safety zone" means the area or space that is both:
 - (a) Officially set apart within a roadway for the exclusive use of pedestrians.
 - (b) Protected or either marked or indicated by adequate signs as to be plainly visible at all times while set apart as a safety zone.
24. "Sidewalk" means that portion of a street that is between the curb lines or the lateral lines of a roadway and the adjacent property lines and that is intended for the use of pedestrians.
25. "Stop", if required, means complete cessation from movement.
26. "Stop, stopping or standing", if prohibited, means any stopping or standing of an occupied or unoccupied vehicle, except when necessary to avoid conflict with other traffic or in compliance with directions of a police officer or traffic control sign or signal.
27. "Through highway" means a highway or portion of a highway at the entrances to which vehicular traffic from intersecting highways is required by law to stop before entering or crossing and when stop signs are erected as provided in this chapter.
28. "Traffic" means pedestrians, ridden or herded animals, vehicles and other conveyances either singly or together while using a highway for purposes of travel.
29. "Traffic control signal" means a device, whether manually, electrically or mechanically operated, by which traffic is alternately directed to stop and to proceed.
30. "Truck" means a motor vehicle that is designed, used or maintained primarily for the transportation of property.

A.R.S. § 28-2001. Definitions.

- A. "Resident", for the purpose of registration and operation of motor vehicles:
 1. Except as provided by paragraph 2, means the following:
 - (a) A person who, regardless of domicile, remains in this state for an aggregate period of seven months or more during a calendar year.
 - (b) A person who engages in a trade, profession or occupation in this state or who accepts employment in other than either:
 - (i) Seasonal agricultural work.
 - (ii) Temporary seasonal work for a period of not more than three months if the state in which the temporary seasonal worker is permanently domiciled has a similar exception.
 - (c) A person who places children in a public school without payment of nonresident tuition.
 - (d) A person who declares that the person is a resident of this state for the purpose of obtaining at resident rates a state license or tuition fees at an educational institution maintained by public monies.

- (e) An individual, partnership, company, firm, corporation or association that maintains a main office, a branch office or warehouse facilities in this state and that bases and operates motor vehicles in this state.
 - (f) An individual, partnership, company, firm, corporation or association that operates motor vehicles in intrastate transportation, for other than seasonal agricultural work.
 - (g) A person who is registered to vote in this state.
2. Does not mean:
- (a) A nonresident owner of a foreign vehicle that is registered and licensed in a state adjoining this state and that is used in this state for other than the transportation of passengers or property for compensation, if the nonresident owner and vehicle are domiciled in an adjoining state but within twenty-five miles of the border of this state and if the state in which the owner resides and in which the vehicle is registered exempts from payment of registration and weight fees like vehicles from this state, regardless of whether the nonresident owner engages in a trade, profession or occupation in this state or accepts employment.
 - (b) An out-of-state student enrolled with seven or more semester hours regardless of whether the student engages in a trade, profession or occupation in this state or accepts employment in this state. For the purposes of this paragraph, "out-of-state student" means either:
 - (i) A person who is enrolled at an educational institution maintained by public monies and who is not classified as an in-state student under section 15-1802.
 - (ii) A person who is a student at a private educational institution and who would not be classified as an in-state student under section 15-1802 if the student were attending a public educational institution.
 - (c) A nonresident daily commuter as defined in section 28-2291.
- B. In this chapter, unless the context otherwise requires:
1. "Mobile home" means a structure that is transportable in one or more sections, including the plumbing, heating, air conditioning and electrical systems that are contained in the structure, and that, when erected on site, is either of the following:
 - (a) More than eight body feet in width, thirty-two body feet or more in length and built on a permanent chassis.
 - (b) Regardless of the size, used as a single family dwelling or for commercial purposes with or without a permanent foundation.
 2. "Serial number" means the number placed on the vehicle by its manufacturer or assigned pursuant to section 28-2165.

A.R.S. § 41-4001. Definitions

In this chapter, unless the context otherwise requires:

1. "Accessory structure" means the installation, assembly, connection or construction of any one-story habitable room, storage room, patio, porch, garage, carport, awning, skirting, retaining wall, evaporative cooler, refrigeration air conditioning system, solar system or wood decking attached to a new or used manufactured home, mobile home or residential single family factory-built building.
2. "Act" means the national manufactured housing construction and safety standards act of 1974 and title VI of the housing and community development act of 1974 (P.L. 93-383, as amended by P.L. 95-128, 95-557, 96-153 and 96-339).
3. "Alteration" means the replacement, addition, modification or removal of any equipment or installation after the sale by a manufacturer to a dealer or distributor but before the sale by a dealer to a purchaser, which may affect compliance with the standards, construction, fire safety, occupancy, plumbing or heat-producing or electrical system. Alteration does not mean the repair or replacement of a component or appliance requiring plug-in to an electrical receptacle if the replaced item is of the same configuration and rating as the component or appliance being repaired or replaced. Alteration also does not mean the addition of an appliance requiring plug-in to an electrical receptacle if such appliance is not provided with the unit by the manufacturer and the rating of the appliance does not exceed the rating of the receptacle to which such appliance is connected.
4. "Board" means the board of manufactured housing.
5. "Broker" means any person who acts as an agent for the sale or exchange of a used manufactured home or mobile home except as exempted in section 41-4028.
6. "Certificate" means a numbered or serialized label or seal that is issued by the director as certification of compliance with this chapter.
7. "Component" means any part, material or appliance that is built-in as an integral part of the unit during the manufacturing process.
8. "Consumer" means either a purchaser or seller of a unit regulated by this chapter who utilizes the services of a person licensed by the department.
9. "Consummation of sale" means that a purchaser has received all goods and services that the dealer or broker agreed to provide at the time the contract was entered into, the transfer of title or the filing of an affidavit of affixture, if applicable, to the sale. Consummation of sale does not include warranties.
10. "Dealer" means any person who sells, exchanges, buys, offers or attempts to negotiate or acts as an agent for the sale or exchange of factory-built buildings, manufactured homes or mobile homes except as exempted in section 41-4028. A lease or rental agreement by which the user acquired ownership of the unit with or without additional remuneration is considered a sale under this chapter.
11. "Defect" means any defect in the performance, construction, components or material of a unit that renders the unit or any part of the unit unfit for the ordinary use for which it was intended.
12. "Department" means the Arizona department of housing.
13. "Director" means the director of the department.

14. "Earnest monies" means all monies given by a purchaser or a financial institution to a dealer or broker before consummation of the sale.
15. "Factory-built building":
 - (a) Means a residential or commercial building that is:
 - (i) Either wholly or in substantial part manufactured at an off-site location and transported for installation or completion, or both, on-site.
 - (ii) Constructed in compliance with adopted codes, standards and procedures.
 - (iii) Installed temporarily or permanently.
 - (b) Does not include a manufactured home, recreational vehicle, panelized building or domestic or light commercial storage building.
16. "HUD" means the United States department of housing and urban development.
17. "Imminent safety hazard" means an imminent and unreasonable risk of death or severe personal injury.
18. "Installation" means:
 - (a) Connecting new or used mobile homes, manufactured homes or factory-built buildings to on-site utility terminals or repairing these utility connections.
 - (b) Placing new or used mobile homes, manufactured homes, accessory structures or factory-built buildings on foundation systems or repairing these foundation systems.
 - (c) Providing ground anchoring for new or used mobile homes or manufactured homes or repairing the ground anchoring.
19. "Installer" means any person who engages in the business of performing installations of manufactured homes, mobile homes or residential single family factory-built buildings.
20. "Installer of accessory structures" means any person who engages in the business of installing accessory structures.
21. "Listing agreement" means a document that contains the name and address of the seller, the year, manufacturer and serial number of the listed unit, the beginning and ending dates of the time period that the agreement is in force, the name of the lender and lien amount, if applicable, the price the seller is requesting for the unit, the commission to be paid to the licensee and the signatures of the sellers and the licensee who obtains the listing.
22. "Local enforcement agency" means a zoning or building department of a city, town or county or its agents.
23. "Manufactured home" means a structure built in accordance with the act.
24. "Manufacturer" means any person engaged in manufacturing, assembling or reconstructing any unit regulated by this chapter.
25. "Mobile home" means a structure built before June 15, 1976, on a permanent chassis, capable of being transported in one or more sections and designed to be used with or without a permanent foundation as a dwelling when connected to on-site utilities. Mobile home does not include recreational vehicles and factory-built buildings.
26. "Office" means the office of manufactured housing within the department.

27. "Purchaser" means a person purchasing a unit in good faith from a licensed dealer or broker for purposes other than resale.
28. "Qualifying party" means a person who is an owner, employee, corporate officer or partner of the licensed business and who has active and direct supervision of and responsibility for all operations of that licensed business.
29. "Reconstruction" means construction work performed for the purpose of restoration or modification of a unit by changing or adding structural components or electrical, plumbing or heat or air producing systems.
30. "Recreational vehicle" means a vehicular type unit that is:
 - (a) A portable camping trailer mounted on wheels and constructed with collapsible partial sidewalls that fold for towing by another vehicle and unfold for camping.
 - (b) A motor home designed to provide temporary living quarters for recreational, camping or travel use and built on or permanently attached to a self-propelled motor vehicle chassis or on a chassis cab or van that is an integral part of the completed vehicle.
 - (c) A park trailer built on a single chassis, mounted on wheels and designed to be connected to utilities necessary for operation of installed fixtures and appliances and has a gross trailer area of not less than three hundred twenty square feet and not more than four hundred square feet when it is set up, except that it does not include fifth wheel trailers.
 - (d) A travel trailer mounted on wheels, designed to provide temporary living quarters for recreational, camping or travel use, of a size or weight that may or may not require special highway movement permits when towed by a motorized vehicle and has a trailer area of less than three hundred twenty square feet. This subdivision includes fifth wheel trailers. If a unit requires a size or weight permit, it shall be manufactured to the standards for park trailers in a 119.5 of the American national standards institute code.
 - (e) A portable truck camper constructed to provide temporary living quarters for recreational, travel or camping use and consisting of a roof, floor and sides designed to be loaded onto and unloaded from the bed of a pickup truck.
31. "Salesperson" means any person who, for a salary, commission or compensation of any kind, is employed by or acts on behalf of any dealer or broker of manufactured homes, mobile homes or factory-built buildings to sell, exchange, buy, offer or attempt to negotiate or act as an agent for the sale or exchange of an interest in a manufactured home, mobile home or factory-built building.
32. "Seller" means a natural person who enters into a listing agreement with a licensed dealer or broker for the purpose of resale.
33. "Site development" means the development of an area for the installation of the unit's or units' locations, parking, surface drainage, driveways, on-site utility terminals and property lines at a proposed construction site or area.
34. "Statutory agent" means a person who is on file with the corporation commission as the statutory agent.

35. "Title transfer" means a true copy of the application for title transfer that is stamped or validated by the appropriate government agency.
36. "Unit" means a manufactured home, mobile home, factory-built building or accessory structures.
37. "Used unit" means any unit that is regulated by this chapter and that has been sold, bargained, exchanged or given away from a purchaser who first acquired the unit that was titled in the name of such purchaser.
38. "Workmanship" means a minimum standard of construction or installation reflecting a journeyman quality of the work of the various trades.

[23 CFR 658.5 Definitions](#)

[49 CFR 71 Standard Time Zone Boundaries](#)

Other Applicable Rules

[A.A.C. R17-5-202 through R17-5-209](#)

[23 CFR 658](#)

[23 CFR 658, Appendix C](#)

[49 CFR 393](#)

[49 CFR 571.119, Standard No. 119; New pneumatic tires for motor vehicles with a GVWR of more than 4,536 kilograms \(10,000 pounds\) and motorcycles.](#)

DEPARTMENT OF ADMINISTRATION

Title 2, Chapter 5, Subchapter A, Covered and Uncovered Employees; Subchapter B, Covered Employees

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - FIVE-YEAR REVIEW REPORT

MEETING DATE: July 10, 2018

AGENDA ITEM: F-3

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF ADMINISTRATION (F-18-0703)
Title 2, Chapter 5, Subchapter A, Covered and Uncovered Employees; Subchapter B, Covered Employees

COMMENTS ON THE FIVE-YEAR REVIEW REPORT

Purpose of the Agency and Number of Rules in the Report:

This five-year-review report from the Arizona Department of Administration (Department) covers 73 rules in A.A.C. Title 2, Chapter 5 related to the State Personnel System. In 2012, Governor Brewer established the State Personnel System, which consolidated seven different personnel systems within the executive branch, and transitioned most of the State employees to at will uncovered status. Covered employees can only be terminated for cause, while uncovered employees serve at the pleasure of the appointment authorities and could be terminated without cause.

Subchapter A, applicable to covered and uncovered employees, establish rules related to the classification system; recruitment, selection, and appointment; compensation system; conditions of employment; leave; performance management; disciplinary actions; complaints; and separations. Subchapter B, applicable to covered employees, establish rules related to employment status; disciplinary actions; grievances; appeals; and reduction in force.

The rules were made via exempt rulemaking in September 2012. This is the first five-year-review report on the rules.

Proposed Action

The Department plans to amend the rules to address the issues identified in this memo and submit a Notice of Final Rulemaking to the Council by December 2019.

1. Has the agency analyzed whether the rules are authorized by statute?

Yes. The Department cites to both general and specific authority for the rules. A.R.S. § 41-742 authorizes the director of the Department to establish and administer the State Personnel System. Additionally, A.R.S. § 41-743 requires the director to adopt rules and procedures relating to personnel and personnel administration for both covered and uncovered employees.

2. Summary of the agency's economic impact comparison and identification of stakeholders:

The rules were made via exempt rulemaking, so no economic, small business, and consumer impact statement was required.

The key stakeholders include the Department as well as approximately 100 state agencies, boards, and commissions. As of June 30, 2017, there were 33,222 employees in the State Personnel System that were subject to these rules.

3. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

Yes. The Department indicates that the rules provide the least intrusive and least costly method of achieving the regulatory objective.

4. Has the agency received any written criticisms of the rules over the last five years?

Yes. The Department received comments on R2-5A-105; R2-5A-B601; R2-5A-B602; R2-5A-B609; and R2-5A-D601. The comment and the Department's response are provided under the respective rule throughout the report. Council staff believes the Department adequately addressed the public comments.

5. Has the agency analyzed the rules' clarity, conciseness, and understandability, consistency with other rules and statutes, and effectiveness?

Yes. The Department indicates that the rules are clear, concise, and understandable with the following exceptions:

- R2-5A-101: Definitions should be amended or added to provide greater clarity.
- R2-5A-302: The term "disabled veteran" should be amended to improve clarity.
- R2-5A-305: Similar to subsection (C), there should also be an exception for relationship to an interviewer or panel member. Additionally, the definition for "related within the third degree" should be modified.
- R2-5A-A601: Clarifying changes should be made to subsection (E), regarding eligibility for continued insurance benefits.

- R2-5A-B611: Subsection (B), related to utilization of meritorious service leave for full authority peace officers, should be amended to remain consistent with the most recent version of the guidelines established by the director of the Department
- R2-5A-C602: Subsection (D), pertaining to insurance benefits continuation, should be removed as it is no longer necessary and creates potential conflict with the statewide benefits policy related to unpaid benefits premium collection.
- R2-5A-D601: Subsection (G), related to insurance benefits continuation, should be removed as it is no longer necessary and creates potential conflict with the statewide benefits policy related to unpaid benefits premium collection.

The Department has identified that the following rules should be amended to be made more effective:

- R2-5A-104: To avoid any potential conflicts, the rule should be amended to replace the listed category of protected individuals with the term “protected category” and by defining the term “protected category” in R2-5A-101.
- R2-5A-403: Subsections (E)(3) and (E)(5) should be amended to remain consistent with the most recent version of the compensation guidelines.
- R2-5A-B603: Subsection (D) should be modified to allow for the use of sick leave to attend court related proceedings under A.R.S. § 8-420 or 13-4429.
- R2-5A-C602: Subsections should be added to address additional circumstances in which an employee can be granted leave without pay.
- R2-5A-D602: The rule is inconsistent with agency procedures. Additionally, the rule restricts the amount of leave that can be used, potentially creating a negative impact for employees.
- R2-5A-D603: The rule requires an employee to submit a copy of the orders when requesting military leave; however, it may not be possible or practical for the employee to submit the orders.
- R2-5A-701: The rule should be amended to incorporate the temporary procedures implemented by the director, to extend the performance appraisal exemption to all uncovered employees in political appointment positions.
- R2-5A-702: In the recent months, the Department has been piloting a new performance appraisal system. Once the new system is finalized, the rule will require amendment.
- R2-5B-202: The rule should be amended to address circumstances such as if an employee on original probation voluntarily accepts an uncovered position and then returns to a covered position, the employee must complete the remainder of the original probationary period.

The Department indicates that the rules are consistent with other rules and statutes, except for R2-5A-D601. The rule, related to Family and Medical Leave Act (FMLA), references “husband and wife” in subsection (D)(4). The subsection is not consistent with the FMLA regulations, which were revised in 2015, to amend the definition of spouse to include all individuals legally married, and specifically include individuals in same-sex and common law marriages.

6. Has the agency analyzed the current enforcement status of the rules?

Yes. The Department indicates that the rules are enforced as written, except for R2-5A-D601. As mentioned above, the rule is inconsistent with the FMLA regulations. The Department enforces the inconsistencies in the rule according to FMLA regulations.

7. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The Department indicates that the rules are not more stringent than federal law.

8. For rules adopted after July 29, 2010, do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

No. The rules do not require issuance of a permit or license.

9. Conclusion

The Department plans to submit a Notice of Final Rulemaking to the Council by December 2019. The report meets the requirements of A.R.S. § 41-1056 and R1-6-301. Council staff recommends approval of this report.

Douglas A. Ducey
Governor



Gilbert Davidson
Chief of Operations
and Interim Director

ARIZONA DEPARTMENT OF ADMINISTRATION

OFFICE OF THE DIRECTOR
100 NORTH FIFTEENTH AVENUE • SUITE 401
PHOENIX, ARIZONA 85007
(602) 542-1500

April 27, 2018

Nicole Ong Colyer, Chair
Governor's Regulatory Review Council
100 N. 15th Ave., Suite 305
Phoenix, Arizona 85007

Re: Arizona Department of Administration; Five-year Review Report
Arizona Administrative Code (A.A.C.) Title 2, Chapter 5, State Personnel System

Dear Ms. Colyer:

In compliance with A.R.S. § 41-1056, the Arizona Department of Administration, Human Resources Division submits a report of its five-year review of Title 2, Chapter 5 of the Arizona Administrative Code. I certify that the Department is in compliance with A.R.S. § 41-1091.

If you have any questions regarding this five-year review report or need additional information, please contact Christine Bronson, Human Resources Division, by phone at (602) 542-1423 or by email at christine.bronson@azdoa.gov, or Fred Burk, Human Resources Division, by phone at (602) 542-1220 or by email at fred.burk@azdoa.gov. Ms. Bronson and Mr. Burk will be present at the Study Session and the Council meeting to answer any questions that the Council members may have about this five-year review report.

Sincerely,

A handwritten signature in black ink, appearing to read "Gilbert Davidson".

Gilbert Davidson
Chief of Operations and Interim Director

Enclosure: Five-year Review Report

cc: Elizabeth Alvarado-Thorson, Assistant Director, Human Resources Division (HRD)
Christine Bronson, Manager, HRD Policy and Legislative Services



FIVE-YEAR-REVIEW REPORT

TITLE 2. ADMINISTRATION

CHAPTER 5. DEPARTMENT OF ADMINISTRATION

STATE PERSONNEL SYSTEM

APRIL 2018

FIVE-YEAR-REVIEW REPORT
TITLE 2. ADMINISTRATION
CHAPTER 5. DEPARTMENT OF ADMINISTRATION
STATE PERSONNEL SYSTEM

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6. PREVIOUS ECONOMIC IMPACT STATEMENT FOR 2 A.A.C. 5	Not Applicable

TITLE 2. ADMINISTRATION
CHAPTER 5. DEPARTMENT OF ADMINISTRATION
STATE PERSONNEL SYSTEM
FIVE-YEAR REVIEW
BACKGROUND AND SUMMARY

Prior to 2012, the majority of state agencies, boards and commissions were subject to the jurisdiction of the Arizona Department of Administration (ADOA) Human Resources System, the largest of the human resources systems within Arizona State Government and one of only two merit systems established by statute. Of the 31,496 employees at the end of FY2011, 25,882 employees, or over 82%, were covered by the merit system. Merit system (i.e., covered or "state service") employees could only be dismissed from service for cause. Less than 18% of the State workforce were non-merit (i.e., uncovered, or "at will") employees, were not subject to the ADOA Personnel Rules, served at the pleasure of the appointing authorities, and could be separated without the right of appeal.

On May 12, 2012, Governor Jan Brewer signed into law HB2571, State Personnel System, which consolidated seven different personnel systems within the executive branch, including the ADOA Human Resources System, into the State Personnel System and transitioned a majority of the State workforce to at will uncovered status. To effect this transition to an at will uncovered workforce, HB2571 added a new section, A.R.S. § 41-742, which identified the categories of current employees who would be at will uncovered and stipulated that all new hires beginning September 29, 2012, were at will uncovered employees, with two exceptions: a full authority peace officer in the covered service in any state agency; and, an employee of the Arizona Department of Corrections employed as a Correctional Officer 1, 2 or 3, or a Community Corrections Officer.

Laws 2012, Chapter 321 (HB2571) authorized the Department to adopt rules relating to personnel and personnel administration for both uncovered and covered employees in the State Personnel System. Section 170 of the Act provided the Department the authority to conduct exempt rulemaking for approximately one year.

In its 2012 rulemaking, the Department renamed A.A.C. Title 2, Chapter 5, from Personnel Administration to State Personnel System and repealed all merit system rules in the Chapter. The new rules for the State Personnel System were effective September 29, 2012, and are contained in two Subchapters. Subchapter A provides rules that are applicable to both covered and uncovered positions, applicants for covered and uncovered positions, and covered and uncovered employees in the State Personnel System. Subchapter B provides rules that are applicable only to covered positions, applicants for covered positions and covered employees in the State Personnel System.

Through an analysis of the rules in 2 A.A.C. 5, the Department has determined that a number of rules could be revised to improve their effectiveness or to clarify their content, as described in this report. The Department may add, delete or modify other rules, as necessary. Subject to review of the Human Resources Director and the ADOA Director, and if a rulemaking moratorium is in effect

at the time the rulemaking is initiated, the Department plans to submit a Notice of Final Rulemaking to the Governor's Regulatory Review Council (Council) by December 2019.

INFORMATION THAT IS IDENTICAL FOR ALL OF THE RULES

As provided by Arizona Administrative Code (A.A.C.) R1-6-301(B), the following information is the same for all of the rules in this report:

1. **Authorization of the rule by existing statute(s)**

A.R.S. § 41-703 provides general authority for the ADOA Director to adopt rules. A.R.S. § 41-742 provides the ADOA Director the authority to establish and administer the State Personnel System. A.R.S. § 41-743 provides specific authority for the ADOA Director to adopt rules and procedures relating to personnel and personnel administration for both covered and uncovered employees and specifies what the rules shall include.

4. **Analysis of consistency with federal and state statutes and rules and a listing of the statutes or rules used in determining the consistency**

a. Consistency with federal statutes

Except as indicated in the “Note” provided below, the rules are consistent with applicable federal laws. The federal laws used in determining the consistency pertain to fair employment practices/discrimination, wage and salary administration, and employee benefits and workplace safety and include, but are not limited to:

- Age Discrimination in Employment Act (ADEA)
- Americans with Disabilities Act (ADA)
- Civil Rights Act of 1964 (Title VII)
- Civil Rights Act of 1991
- Equal Pay Act
- Fair Credit Reporting Act (FCRA)
- Fair Labor Standards Act (FLSA), which is incorporated by reference in Section R2-5A-404
- Family and Medical Leave Act (FMLA), which is incorporated by reference in Section R2-5A-D601
- Immigration Reform and Control Act (IRCA)
- Pregnancy Discrimination Act
- Uniformed Services Employment and Reemployment Rights Act (USERRA), which is incorporated by reference in Section R2-5A-D603

Note:

Rule R2-5A-D601, Family and Medical Leave Act (FMLA) Leave, specifically subsection (D)(4), which references “husband and wife” is not consistent with the FMLA regulations. The FMLA regulations, which were revised in 2015, amended the definition of spouse to include all individuals in legal marriages, and specifically includes individuals in same-sex and common law marriages. The agency is enforcing any inconsistencies in rule according to FMLA regulations.

b. Consistency with state statutes

The rules are consistent with state laws. The state laws used in determining consistency include, but are not limited to:

- A.R.S. § 1-301, Holidays enumerated
- Applicable statutes in A.R.S. Title 23 (Labor); specifically, Chapter 2 (Employment Practices and Working Conditions), Article 9 (Wages and Hours of Public Employees)
- Applicable statutes in A.R.S. Title 38 (Public Officers and Employees)
- Applicable statutes in A.R.S. Title 41 (State Government); specifically, Chapter 4, (Department of Administration and Personnel Board), Articles 4 (State Personnel System) and 5 (Covered Service); and Chapter 9 (Civil Rights), Article 4 (Discrimination in Employment)

Note:

It is important to note that the state laws in Title 23 (Labor), Chapter 2 (Employment Practices and Working Conditions), Articles 8 (Minimum Wage and Employee Benefits) and 8.1 (Earned Paid Sick Time) do not apply to the State of Arizona as an employer.

c. Consistency with other rules made by the agency

The rules are consistent with other rules made by the Department. The rules used in determining the consistency include, but are not limited to:

- 2 A.A.C. 1, Department of Administration
- 2 A.A.C. 6, Department of Administration – Benefit Services Division
- 2 A.A.C. 7, Department of Administration – State Procurement Office
- 2 A.A.C. 10, Department of Administration – Risk Management Division
- 2 A.A.C. 11, Department of Administration – Public Buildings Maintenance
- 2 A.A.C. 15, Department of Administration – General Services Division

5. Agency enforcement policy

The rules have been enforced by the ADOA Director, statewide HRD Director, Chief Human Resources Officers assigned to large agencies, and the Shared Services Chief Human Resources Officer, who provides human resources guidance for small and medium agencies, and by statewide human resources policies and guidelines issued by the Department, as well as standardized forms. Agency human resources policies are subject to review by ADOA HRD.

8. Economic, small business and consumer impact comparison

The rules in 2 A.A.C. 5 were adopted by exempt rulemaking, effective September 29, 2012, and published in the Arizona Administrative Register (A.A.R.) at 18 A.A.R. 2782. A subsequent exempt rulemaking amended nine rules effective April 13, 2013, and published at 19 A.A.R. 717. Because these rulemakings were exempt from the requirements of the Administrative Procedures Act, no economic, small business and consumer impact statement was required at the time of the rulemaking.

In this economic, small business, and consumer impact comparison, annual cost/revenues are designated as “minimal” when less than \$1,000.00; “moderate” when between \$1,000.00 and \$10,000.00; “substantial” when \$10,000.00 or more; and “significant” when meaningful or important, but not readily subject to quantification.

Currently, approximately 100 state agencies, boards and commissions are in the State Personnel System (SPS) and subject to these rules. The SPS is the largest personnel system in State government and the Department administers the SPS through these rules, statewide policies and procedures, and by providing support to individual agencies and oversight of their personnel management.

According to the State of Arizona 2017 Workforce Report published by the Department, as of June 30, 2017, there were 33,222 SPS employees. With some exceptions, all employees are subject to these rules, which outline the job classification system, recruitment, selection, pay, leave administration, performance management, changes to employment status and a complaint system. Additional rules apply to only covered employees.

The Department estimates any additional costs imposed to the state agencies, boards and commissions subject to the rules to be moderate. All personnel actions are subject to the availability of funding. The rules directly affect state agencies and employees and not small businesses or consumers.

9. **Summary of business competitiveness analyses of the rules**

The Department did not receive a business competitiveness analysis of the rules in the last five years.

10. **Status of the completion of action indicated in the previous five-year review report**

Not applicable. This is the first five-year review report on these rules.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective**

The Department has determined that the rules impose the least burden and costs to persons regulated by the rules.

12. **Analysis of stringency compared to federal laws**

After analysis, the Department has determined that the rules are not more stringent than federal laws.

13. **For rules adopted after July 29, 2010, that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with A.R.S. § 41-1037**

Not applicable. The rules in 2 A.A.C. 5 do not require the issuance of a regulatory permit or license.

ANALYSIS OF INDIVIDUAL RULES

SUBCHAPTER A. COVERED AND UNCOVERED EMPLOYEES

ARTICLE 1. GENERAL R2-5A-101 through R2-5A-105

This Article includes definitions of terms used in the rules, general provisions, applicability, and a prohibition against discrimination. The Article also provides procedures for personnel records, including the information that may be included in the record, access, and the disclosure of information regarding an employee.

R2-5A-101. Definitions

2. **The objective of the rule**

This rule provides definitions of words and terms used throughout Subchapter A and Subchapter B of the State Personnel System Rules. This rule is necessary to ensure consistency in personnel practices and administration and must exist in some form.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be partially clear, concise and understandable. During the Department's review of the rules, there was discussion regarding several definitions that could be added or amended to provide additional clarity to the definitions and rules.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of this rule have been received.

14. **Proposed course of action**

The Department plans to amend R2-5A-101 by adding, amending, or deleting several definitions, including, but may not be limited to:

- a. "Child"
- b. "Disciplinary action"
- c. "Parent"
- d. "Premium contribution"
- e. "Protected category"
- f. "Reallocation"

g. "State employment"

Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-102. General Provisions

2. The objective of the rule

This rule provides general provisions, establishing the authority of the Director of ADOA the delegation of authority by the Director, the requirement of the availability of funds, statewide employee handbook, the correction of errors, employment contract prohibition (unless authorized by law), and defines service of notice.

3. Analysis of effectiveness in meeting the objective

The Department believes that the rule effectively meets its objective.

6. Analysis of clarity, conciseness and understandability

The Department considers the language of the rule to be clear, concise and understandable.

7. Summary of the written criticisms of the rule within the last five years

During the last five years, no written criticisms have been received.

14. Proposed course of action

The rule remains effective and no repeal or amendment is contemplated.

R2-5A-103. Applicability

2. The objective of the rule

This rule defines the applicability of the rules to both covered and uncovered positions, applicants and employees in the State Personnel System, and establishes the authority to waive any rule and implement temporary procedures, or establish a pilot.

3. Analysis of effectiveness in meeting the objective

The Department believes that the rule effectively meets its objectives.

6. Analysis of clarity, conciseness and understandability

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-104. Prohibition Against Discrimination, Harassment and Retaliation

2. **The objective of the rule**

This rule requires each agency to prohibit discrimination, harassment and retaliation, and provides a reference to applicable rules for applicant or employee complaints.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective; however, to avoid potential conflicts with respect to various protected categories, the Department will amend this rule by replacing the listed categories with the term “protected category”, and adding the term “protected category” to the definitions listed in Section R2-5A-101.

Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-105. Records

2. **The objective of the rule**

This rule delineates the documents that shall be contained in the official employee personnel file, who has access to the file, and control of the file. The rule also defines documents to be maintained such as employment application materials, and prescribes disclosure of these records.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

The Department received one written criticism/comment of the rule in the past five years.

Comment: In September 2016, Craig Harris, *The Arizona Republic*, sent an email to the Department's Public Information Officer and also submitted a letter to the Governor's Regulatory Review Council (GRRC), which GRRC forwarded to the Department. In his correspondence, Mr. Harris acknowledged that the Department was given rulemaking authority by the Legislature; however, he believed the Department had made [R2-5A-105] "in secret" and without any public hearings.

Response: R2-5A-105 was added by exempt rulemaking in 2012; however, the rule previously existed in a substantively similar form as R2-5-105 since 1986. The Department was given the authority by statute to enact the personnel rules in order to implement the 2012 personnel reform. Laws 2012, Ch. 321, Sec. 170 exempted the Department from the regular rulemaking requirements; however, the Department was required to provide at least two opportunities for comment. The Department not only provided two opportunities for comment, but it also communicated with state agencies, worked with interested parties throughout the process, and launched a public website to provide information about personnel reform, key dates and the rulemaking. Further, although no response to comments was required, the Department provided a summary of how it modified the rules based on comments received as set forth in the notices of Exempt Rulemaking.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

**ARTICLE 2. CLASSIFICATION SYSTEM
R2-5A-201 through R2-5A-203**

This Article provides for the establishment of a classification system including the requirement to classify a position prior to use, development and use of a class specification, job descriptions, and provides procedures for a review of a position.

R2-5A-201. Classification Plan

2. **The objective of the rule**

This rule establishes the classification system for state positions.

3. **Analysis of effectiveness in meeting the objective**

The Department believes the rule effectively meets the objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department has no immediate plans to repeal or amend the rule at this time.

R2-5A-202. Change in Classification

2. **The objective of the rule**

This rule provides the ability to review and amend the job classification of a position due to change in classification plan or job duties.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

**ARTICLE 3. RECRUITMENT, SELECTION AND APPOINTMENT
R2-5A-301 through R2-5A-308**

This article establishes the procedures under which potential applicants are recruited, selected for employment, and appointed to positions, including conducting reference and background checks. It also addresses employment of relatives, and applicant complaint procedures.

R2-5A-301. General

2. **The objective of the rule**

This rule provides general authority for the Director to establish a centralized employment system.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-302. Recruitment

2. **The objective of the rule**

This rule establishes a centralized recruitment process.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The rule is mostly clear, concise and understandable, but could be improved by clarifying the term “disabled veteran”.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to amend the rule to clarify as referenced in item #6. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-303. Reference and Background Checks

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 41-746(B) as additional specific authority.

2. **The objective of the rule**

This rule requires candidates to furnish, and the appointing authority to verify, education, experience, licensure, and references. The rule also prohibits an appointing authority from conducting a criminal background check or a credit check without statutory authority or executive order authority.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the rule to be clear, concise and understandable as written.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-304. Qualifications of Selected Candidate

2. **The objective of the rule**

This rule establishes that all candidates hired for state employment must possess the qualifications required for the position.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-305. Employment of Relatives

2. **The objective of the rule**

This rule delineates an appointee's family relationships with a supervisor, interviewer or interview panel members, and other employees, and provides for an exception by the Director.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

This rule is mostly clear, concise and understandable but could be improved by allowing for an exception for relationship to an interviewer or panel member. The clarity of the rule could also be improved by modifying the definition of "related within the third degree".

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to amend the rule to clarify as referenced in item #6. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-306. Hiring Requirements

2. **The objective of the rule**

This rule reinforces each agency's responsibility to comply with federal and state employment laws.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-307. Appointment

2. **The objective of the rule**

This rule delineates the types of appointments that may be made to state positions.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-308. Applicant Complaint

2. **The objective of the rule**

This rule provides a complaint avenue for an applicant who alleges discrimination or harassment during the application or selection process.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

**ARTICLE 4. COMPENSATION SYSTEM
R2-5A-401 through R2-5A-406**

This article addresses the statewide salary plan, pay administration and overtime rules.

R2-5A-401. Salary Plans

2. **The objective of the rule**

This rule outlines the requirement that employees' pay must be within minimum and maximum rates for the classification, and permits the Director to establish an alternative salary plan.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-402. Salary Administration

2. **The objective of the rule**

The rule requires the ADOA Director to develop procedures for salary administration and identifies the factors that must be considered by an agency head when setting an employee's salary.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives. Of note, the Department is monitoring a human resources national trend that emerged during 2017 – a movement to ban salary history inquiries – as the rule lists the employee's current or former salary as one of several factors for consideration including education, experience, skills, performance, and the salaries of similarly situated employees when setting an employee's salary. The practice of setting an employee's salary partly on what the employee has earned in the past has become controversial in recent years because some believe that this practice may encourage pay inequities to persist throughout an employee's career.

During the 2018 Arizona legislative session, at least three bills were introduced in an attempt to ban Arizona employers from asking about an applicant's salary history information (HB2224, HB2353 and SB1242); however, none of the bills were heard in committee. At the regional level, with a recent ruling, the Ninth Circuit Court of Appeals joins the Fifth, Tenth and Eleventh Circuits in holding that the Equal Pay Act precludes employers from relying on an employee's prior pay when setting a starting salary that results in a wage discrepancy.

The Seventh and Eighth Circuits, by contrast, have held that reliance on the use of prior salary history does not, by itself, violate the Equal Pay Act. This split in the Circuit Courts may lead to eventual Supreme Court intervention.

6. **Analysis of clarity, conciseness and understandability**

The Department believes that the language of the rule is clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department will continue to monitor state legislation, federal legislation and court decisions, and intends to amend the rule by removing the current or former salary from the factors that must be considered when setting an employee's salary. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-403. Supplemental Pay

2. **The objective of the rule**

This rule outlines different types of supplemental pay, and allows an employee to exceed the maximum of the grade range due to the receipt of the supplemental pay.

3. **Analysis of effectiveness in meeting the objective**

The rule is mostly effective in meeting its objective. However, the most recent revision of the compensation guidelines has resulted in a conflict between the rule and the guidelines for subsection E.3. Variable Pay, and subsection E.5, reporting on the utilization of variable pay strategies. Specifically, the reporting requirements outlined in rule are not consistent with the compensation guidelines.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable. As noted in item #3 above, there are two noted conflicts in the rule versus current guidelines.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to revise the rule to address the conflicts noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-404. Overtime

2. **The objective of the rule**

The rule provides the procedures for approval of overtime work, delineates overtime eligibility, and maximum accumulation of compensatory leave hours.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-405. Tuition Reimbursement for Education

2. **The objective of the rule**

This rule allows a state agency to develop an agency tuition reimbursement program.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-406. Reimbursement for Relocation

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 35-196.01(B) as additional specific authority.

2. **The objective of the rule**

This rule allows for relocation expenses for management-initiated transfers.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

**ARTICLE 5. CONDITIONS OF EMPLOYMENT
R2-5A-501 through R2-5A-504**

This article establishes the standards of conduct, the hours of work, criteria for outside employment, and an alcohol and drug-free workplace.

R2-5A-501. Standards of Conduct

2. **The objective of the rule**

This rule establishes the standards of conduct expected of a state employee, prohibited conduct, and consequences of noncompliance.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-502. Hours of Work

2. **The objective of the rule**

The rule establishes the state work week, hours of employment and attendance standards, and allows for flexible work schedules.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-503. Outside Employment

2. **The objective of the rule**

This rule outlines the parameters for a state employee to engage in secondary employment.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-504. Alcohol and Drug-free Workplace

2. **The objective of the rule**

This rule establishes the State of Arizona as an Alcohol and Drug-free Workplace employer.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

ARTICLE 6. LEAVE

This article explains the various types of employee leave, eligibility and use.

PART A. GENERAL R2-5A-A601. Leave Administration

R2-5A-A601. Leave Administration

2. **The objective of the rule**

This rule explains who is eligible for leave benefits, the interaction of various employee leaves, and the process for requesting leave.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The rule is mostly clear, concise and understandable, but could be improved by clarifying subsection E., regarding eligibility for continued insurance benefits.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department proposes to amend the rule to clarify as noted in item #6. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

**PART B. PAID LEAVE
R2-5A-B601 through R2-5A-B611**

R2-5A-B601. Holidays

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. §§ 1-301 and 38-608 as additional statutory authority.

2. **The objective of the rule**

This rule identifies state holidays, award of holiday pay for less than full time employment, procedure for compensating employees, and the maximum holiday pay entitlement.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives. Although the rule does not offer flexibility to accommodate unique scheduling situations such as 24/7 operations, an agency is able to request a rule waiver to address these types of situations which occur infrequently with a small population.

6. **Analysis of clarity, conciseness and understandability**

The Department believes the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

The Department received one written criticism/comment of the rule in the past five years.

Comment: A written comment was received from a State employee who had previously worked for a county; the employee suggested the State eliminate Columbus Day from observed holidays and instead observe the day after Thanksgiving as a holiday, similar to what had been implemented by Maricopa County.

Response: Legislative action would be required to change the applicable statute(s) to change any legally observed holidays. A.R.S. § 38-401, Office hours for state offices, requires state offices to be open from 8:00 a.m. to 5:00 p.m. each day from Monday through Friday except on holidays (as listed in A.R.S. § 1-301, Holidays enumerated). By contrast, county offices are governed by A.R.S. § 11-413, County offices; business periods, which permits a county board of supervisors to designate the Friday after the fourth Thursday in November (Friday after Thanksgiving) as a legal holiday in place of the second Monday in October (Columbus Day).

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B602. Annual Leave

1. Authorization of the rule by existing statute(s)

The rule has A.R.S. § 41-748 as additional specific authority, pertaining to the donation of annual leave.

2. The objective of the rule

This rule explains the employee annual leave benefit eligibility, accrual, maximum accumulation, provisions for donation, use, and disposition upon transfer to another agency or separation from state employment.

3. Analysis of effectiveness in meeting the objective

The Department believes that the rule effectively meets its objectives.

6. Analysis of clarity, conciseness and understandability

The Department believes this rule to be clear, concise and understandable.

7. Summary of the written criticisms of the rule within the last five years

The Department received one written criticism/comment of the rule in the past five years.

Comment: In February 2014, following the death of an Arizona Department of Transportation (ADOT) employee, a member of ADOT's management team submitted an email asking about employees donating annual leave to the deceased employee's family in order to help the family with funeral expenses.

Response: A.R.S. § 41-748 governs this leave, and the transfer of annual leave may only occur from one employee to another employee in the same state agency, or, from one employee to another state employee in another state agency if the employees are members of the same family (defined). Although donations of annual leave would not be permitted in the situation described, existing rules allow an agency head to implement a policy regarding the payment of annual leave to a non-separating employee, thereby allowing an employee to assist the family of a deceased employee by donating the cash received from an annual leave payout.

14. Proposed course of action

The rule remains effective and no repeal or amendment is projected.

R2-5A-B603. Sick Leave

2. **The objective of the rule**

This rule explains the employee sick leave benefit eligibility, accrual, use and forfeiture.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule generally meets its objectives. Subsection D, Use of sick leave, does not include the use of sick leave to attend court-related proceedings under A.R.S. § 8-420 or 13-4429 (See also A.A.C. R2-5A-D604, Victim Leave).

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be partially clear, concise and understandable, for the reason cited in item #3.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department plans to clarify the rule by adding the ability of an employee to use sick leave for the purposes of victim leave pursuant to R2-5A-D604. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-B604. Administrative Leave

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 41-749 as additional specific authority.

2. **The objective of the rule**

This rule establishes the conditions under which an employee may be placed on administrative leave.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B605. Bereavement Leave

2. **The objective of the rule**

This rule permits an employee to be absent with pay due to the death or funeral of a family member, identifies the family relationships, and the amount of leave permitted.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B606. Civic Duty Leave

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 16-402 as additional statutory authority.

2. **The objective of the rule**

This rule establishes procedures and identifies the circumstances that an employee may be absent with pay to fulfill civic duty obligations.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B607. Compensatory Leave

2. **The objective of the rule**

This rule provides the procedures for an employee to earn compensatory leave, use, maximum accumulation, and payment of compensatory time earned.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B608. Educational Leave

2. **The objective of the rule**

This rule grants agencies the authority to allow an employee to take leave to participate in educational or training programs that will benefit the state and establishes minimum requirement guidelines to ensure fiscal accountability.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B609. Living Donor Leave

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 41-706 as additional statutory authority.

2. **The objective of the rule**

This rule provides absence with pay to an employee to serve as a bone marrow donor or organ donor per A.R.S. § 41-706.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

The Department received one written criticism/comment of the rule in the past five years.

Comment: In April 2015, an ADOT employee sent an email to the HRD mailbox regarding taking time off to care for a living donor who was the employee's significant other, and asked if living donor leave could be expanded to include paid leave in these situations.

Response: A.R.S. § 41-706 governs this leave, and the leave may be taken only by a state employee (defined) who serves as a bone marrow donor or organ donor. Absent a statutory change, the Department is unable to amend the rule to extend paid living donor leave to any employee other than the employee who serves as the donor.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B610. Leave for National Disaster Medical System (NDMS) Training

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 38-610 as additional statutory authority.

2. **The objective of the rule**

This rule provides absence with pay to an employee who is on training duty with the National Disaster Medical System (NDMS), as provided by A.R.S. § 38-610.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-B611. Meritorious Service Leave

2. **The objective of the rule**

This rule requires the Director to establish guidelines for meritorious service leave and permits an agency head to establish a meritorious service leave program in accordance with the guidelines.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule is mostly effective in meeting its objectives. However, the most recent revision of the guidelines has created a conflict between the rule and the guidelines for subsection B, regarding the utilization of meritorious service leave for full authority peace officers.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable. As noted in #3 above, there is a noted conflict in the rule versus current guidelines.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to revise the rule to address the conflict noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

PART C. UNPAID LEAVE
Section R2-5A-C601 through R2-5A-C602

R2-5A-C601. Furlough

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 41-754 as additional specific authority.

2. **The objective of the rule**

This rule provides for the use of involuntary unpaid leave for budgetary reasons, the procedures an agency head must follow for requesting use of furloughs, and procedures for placing employees on furlough.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-C602. Leave Without Pay

2. **The objective of the rule**

This rule establishes procedures for an employee to be absent without pay, use of unpaid leave, return to work provisions, and continued participation in the health benefit and life insurance plans while on leave without pay.

3. **Analysis of effectiveness in meeting the objective**

The Department believes the rule is mostly effective in meeting its objective. However, there are subsections that may need revision in order to address additional circumstances for use of leave without pay.

In addition, most of the language in subsection D. Insurance benefits continuation, is no longer necessary and creates potential conflict with a recently issued statewide benefits policy pertaining to unpaid benefits premium collection.

6. **Analysis of clarity, conciseness and understandability**

The Department believes this rule to be mostly clear, concise and understandable, except as noted in item #3 above.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to revise the rule to address the conflict noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

**PART D. LEAVE THAT COULD BE EITHER PAID OR UNPAID
R2-5A-D601 through R2-5A-D604**

R2-5A-D601. Family and Medical Leave Act (FMLA) Leave

2. **The objective of the rule**

This rule establishes procedures for leave taken that qualifies as Family and Medical Leave Act (FMLA) leave, and an employee's eligibility for continued participation in the health benefit and life insurance plans while on FMLA leave.

3. **Analysis of effectiveness in meeting the objective**

The Department believes the rule to be mostly effective in meeting its objective. As noted in the Department's response to item #4 (Information That is Identical for All of the Rules), there is one technical and conforming conflict in the rule as compared with interpretation of federal law, revising the term "husband and wife" to "spouse". In addition, most of the language in subsection G. Insurance benefits continuation, is no longer necessary and creates potential conflict with statewide benefits policy pertaining to unpaid benefits premium collection.

6. **Analysis of clarity, conciseness and understandability**

The Department believes the rule to be mostly clear, concise and understandable with the revisions addressed in item #3.

7. **Summary of the written criticisms of the rule within the last five years**

One comment was received from the Department of Gaming regarding the terminology "husband and wife", which the Department has addressed in item #3 above.

14. **Proposed course of action**

The Department intends to revise the rule to address the conflicts noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-D602. Industrial Leave

2. **The objective of the rule**

This rule explains the use of industrial leave, payments, light duty, continued participation in the health benefit and life insurance plans, and eligibility for continued accrual of other leaves.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule is partially effective in meeting its objective. Recent establishment of more accurate automated procedures caused a conflict within the rule and brought to light the inconsistency in application of calculations used in determining workers' compensation benefits. The rule unintentionally restricts the amount of leave that can be used, creating a potentially negative impact to the employee. In addition, most of the language in subsection G. Insurance benefits continuation, is no longer necessary and creates potential conflict with statewide benefits policy pertaining to unpaid benefits premium collection.

6. **Analysis of clarity, conciseness and understandability**

The Department believes that the rule is partially clear, concise and understandable with the exception noted in item #3 above.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to revise the rule to address the conflicts noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-D603. Military Leave

2. **The objective of the rule**

This rule identifies the circumstances and the maximum number of hours that an employee may be absent with pay to fulfill military obligations.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule is mostly effective in meeting its objectives. The rule currently requires a copy of the orders to be submitted with the request for military leave, which may not be possible or practical.

6. **Analysis of clarity, conciseness and understandability**

The Department believes the rule to be mostly, clear, concise and understandable with the exception of the item addressed in #3 above.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to revise the rule to address the issue noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-D604. Victim Leave

2. **The objective of the rule**

This rule establishes the conditions under which an employee may be absent from work to attend certain court proceedings if they were the victim of a crime.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

**ARTICLE 7. PERFORMANCE MANAGEMENT
R2-5A-701 through R2-5A-702**

This article establishes the appraisal system used to rate the work performance of an employee, including frequency, rating, and training requirements.

R2-5A-701. General

2. **The objective of the rule**

This rule requires the Director to establish a performance management system, develop an administrative manual and training, and outlines who may be excepted from the system.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule is mostly effective in meeting its objectives. In April 2015, in accordance with A.A.C. R2-5A-103(B), the ADOA Director implemented temporary procedures to extend the performance appraisal exemption to all uncovered employees in political appointment positions (i.e., positions listed in A.R.S. § 41-742(F)).

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable with the exception of the item addressed in #3 above.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to amend the rule to incorporate the temporary procedures noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5A-702. Performance Management Process

2. **The objective of the rule**

This rule outlines the performance evaluation requirements and responsibilities.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule is partially effective in meeting its objectives. The current rule was adopted during the 2012 Personnel Reform. Shortly after its adoption, the Department launched a new statewide performance appraisal system, Managing Accountability and Performance (MAP), to comply with the new rule. Agencies have reported that the MAP system, similar to prior appraisal systems, is cumbersome and time consuming. To address agency concerns, the Department has been piloting a new performance appraisal system. Once the new system is finalized, it is anticipated that rule revisions will be necessary.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable with the exception of the item addressed in #3 above.

7. **Summary of the written criticisms of the rule within the last five years**

Although the Department has received comments regarding the MAP system, during the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to amend the rule to address the issues noted in item #3. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

**ARTICLE 8. DISCIPLINARY ACTIONS
R2-5A-801 through R2-5A-803**

This article provides the general requirements for administering disciplinary actions, the procedures for review by the ADOA Director, and the circumstances under which an employee may request a review of a disciplinary action.

R2-5A-801. General

2. **The objective of the rule**

This rule explains the factors that should be taken into consideration when imposing a disciplinary action, limitations, and review by the ADOA Director.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-802. Procedures for Review by the Director

2. **The objective of the rule**

This rule establishes the procedures required by an agency head prior to imposing a suspension greater than 80 hours, a demotion, or a dismissal.

3. **Analysis of effectiveness in meeting the objective**

The Department believes the rule is effective in meeting its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-803. Employee Request for Review of Disciplinary Action

2. **The objective of the rule**

This rule outlines a covered employee's ability to request a review of a disciplinary action and the limitations on requesting such a review.

3. **Analysis of effectiveness in meeting the objective**

The Department believes this rule is effective in meeting its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be mostly clear, concise and understandable, but could be improved by clarifying subsection B., by replacing "a state merit board or council" with "the State Personnel Board or the Law Enforcement Merit System Council" to eliminate any potential confusion.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to amend the rule to improve clarity as noted in item #6. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

**ARTICLE 9. COMPLAINTS
R2-5A-901 through R2-5A-902**

This article outlines the requirement for each agency to provide a complaint system, and establishes the minimum requirements for each agency's procedures.

R2-5A-901. Complaint System

2. **The objective of the rule**

This rule establishes the system and procedure for all employee complaints concerning discrimination or harassment, defines the scope, requires each agency head to adopt a procedure to address these types of employee complaints and to designate an employee of the agency to serve as the agency's complaint coordinator, and to submit the proposed complaint procedure, as well as any subsequent revisions, to ADOA for approval.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-902. Complaint Procedures

2. **The objective of the rule**

This rule establishes the procedures required of each agency's complaint system, information that must be contained in a complaint, timeframes, and the ability of an employee to elevate a complaint to the ADOA Director.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

ARTICLE 10. SEPARATIONS R2-5A-1001 through R2-5A-1002

This article addresses voluntary and involuntary separations from State employment.

R2-5A-1001. Voluntary Separation

2. **The objective of the rule**

This rule addresses separations that are considered voluntary.

3. **Analysis of effectiveness in meeting the objective**

The Department believes the rule to be effective in meeting its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

R2-5A-1002. Involuntary Separation

2. **The objective of the rule**

This rule outlines the circumstances under which a separation from employment is considered involuntary.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objectives.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms of the rule have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is projected.

SUBCHAPTER B. COVERED EMPLOYEES

This subchapter outlines the rules that are applicable only to covered employees, including probation, permanent status, change to uncovered service, disciplinary actions, grievances, appeals, and reduction in force.

**ARTICLE 1. GENERAL
R2-5B-101 through R2-5B-102**

This article includes definitions of terms used in the subchapter and reinforces that the rules in this subchapter are applicable to only covered positions and covered employees.

R2-5B-101. Definitions

2. **The objective of the rule**

This rule provides definitions that apply exclusively to covered employees.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-102. Applicability

2. **The objective of the rule**

This rule delineates what constitutes a covered employee and covered service.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

ARTICLE 2. EMPLOYMENT STATUS R2-5B-201 through R2-5B-205

This article identifies the different status categories of covered employees, including original probation, promotional probation and permanent status.

R2-5B-201. Applicability

2. **The objective of the rule**

This rule reinforces that the rules included in this article apply only to positions in the covered service and covered employees.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-202. Original Probation

2. **The objective of the rule**

This rule establishes an original probationary period, provides for extensions of original probation, outlines the completion of the original probation, and provides for the separation of an employee while on original probation.

3. **Analysis of effectiveness in meeting the objective**

The Department believes the rule is partially effective in meeting the objective. This rule is substantially similar to the Personnel Rules that were in effect prior to Personnel Reform. Prior to Reform, if an uncovered employee moved to a position in the covered service, it was the State's practice to place the employee on original probation, unless the employee was eligible for credit for prior covered service, or the employee was a reinstatement or reemployment (no longer applicable under the State Personnel System).

After Reform, the State continued the practice of placing an employee on original probation if the employee moved from a position in the uncovered service (e.g., a Correctional Sergeant) to a position in the covered service (e.g., a Correctional Officer 2).

In one particular case, an individual employed by the Arizona Department of Corrections (ADC) had completed the original probationary period as a Correctional Officer, promoted to Correctional Sergeant (uncovered), and then demoted to Correctional Officer 2 (covered). Consistent with past practice, ADC placed the employee on original probation in the covered class. ADC subsequently terminated the individual, and because the individual was on original probation, the individual was advised he had no right of appeal. The individual filed an appeal with the Personnel Board, citing he had previously satisfied the original probation requirements and should not have been placed on original probation again. The case was elevated through the courts and ADC reported that a court ultimately ruled that the Personnel Board must take jurisdiction on the termination appeal stating that ADC did not have the authority to establish such a policy because the State Personnel System Rules were silent on this matter.

Although the situation described above concerns an individual who completed the original probationary period, this highlights that the rules have an unintended gap with respect to completion of probation prior to movement to the uncovered service. This should be addressed as the intent is to ensure an individual successfully completes the full original probationary period and not allow movement within the system to circumvent that requirement.

6. **Analysis of clarity, conciseness and understandability**

The Department believes the rule to be partially clear, concise and understandable with the exception of the issue identified in #3.

7. **Summary of the written criticisms of the rule within the last five years**

No written criticisms of the rule have been received.

14. **Proposed course of action**

The Department intends to revise the rule to address the conflicts noted in item #3, by incorporating a requirement that if an employee on original probation voluntarily accepts a change in assignment to the uncovered service and subsequently returns to a position in the covered service, the employee must complete the remainder of the original probationary

period so the employee serves the required one year of original probation. Subject to the rulemaking moratorium, the Department anticipates submitting a Notice of Final Rulemaking by December 2019.

R2-5B-203. Promotional Probation

2. **The objective of the rule**

This rule establishes a promotional probationary period, provides for extensions of promotional probation, outlines the completion of the promotional probation, and the agency head's authority to revert an employee who fails to successfully complete a promotional probationary period.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-204. Permanent Status

2. **The objective of the rule**

This rule defines a permanent status employee.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-205. Change from Covered to Uncovered Service

2. **The objective of the rule**

This rule prescribes the circumstances under which a covered employee is moved into the uncovered service including voluntary election, change in assignment, or return to state employment after a break in service.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

**ARTICLE 3. DISCIPLINARY ACTIONS
R2-5B-301 through R2-5B-305**

This article provides the general requirements for administering disciplinary actions to covered employees, and the procedures for review of a disciplinary action by the ADOA Director.

R2-5B-301. General

2. **The objective of the rule**

This rule reinforces that the rules included in this article apply only to covered employees, and that certain disciplinary actions are subject to review by the ADOA Director.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-302. Reprimand

2. **The objective of the rule**

This rule establishes authority and procedures for issuing a reprimand to a covered employee.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-303. Suspension

2. **The objective of the rule**

This rule explains the basis and procedures for suspension without pay of a covered employee.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-304. Involuntary Demotion

2. **The objective of the rule**

This rule explains the basis and procedure for demotion of a covered employee.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-305. Dismissal

2. **The objective of the rule**

This rule provides the basis and procedures for dismissal of a covered employee.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

**ARTICLE 4. GRIEVANCES
R2-5B-401 through R2-5B-403**

This Article establishes the grievance system and procedures for covered employees.

R2-5B-401. Applicability

2. **The objective of the rule**

This rule reinforces that the rules included in this article apply only to covered employees.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-402. Grievance System

2. **The objective of the rule**

This rule establishes the requirement for each agency with covered employees to establish a grievance procedure, subject to the approval of the ADOA Director, and identifies non-grievable matters.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-403. Grievance Procedures

2. **The objective of the rule**

This rule establishes the minimum content of an agency's grievance procedure.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

**ARTICLE 5. APPEALS
R2-5B-501 through R2-5B-503**

This article delineates the two forms of appeals that covered employees may file with the appropriate review board or council.

R2-5B-501. Applicability

2. **The objective of the rule**

This rule reinforces that the rules included in this article apply only to covered employees.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-502. General

2. **The objective of the rule**

This rule outlines when a covered employee, who is not a full authority peace officer, may file an appeal, the actions that may be appealed, and the body to which an appeal may be filed.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-503. Full Authority Peace Officers

2. **The objective of the rule**

This rule outlines when a covered full authority peace officer may file an appeal, the actions that may be appealed, and the body to which an appeal is to be filed.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

**ARTICLE 6. REDUCTION IN FORCE
R2-5B-601 through R2-5B-603**

This article explains the basis and procedures for a reduction in force involving covered employees, and employees' ability to request a review.

R2-5B-601. Applicability

2. **The objective of the rule**

This rule reinforces that the rules included in this article apply only to positions in the covered service and covered employees.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-602. Reduction in Force Procedures

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 41-772 as additional specific authority.

2. **The objective of the rule**

This rule describes the circumstances under which a proposal may be submitted, the timelines for submittal, approval, calculation of retention points, and administration of a reduction in force.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

R2-5B-603. Employee Request for Review

1. **Authorization of the rule by existing statute(s)**

The rule has A.R.S. § 41-772(D) as additional specific authority.

2. **The objective of the rule**

This rule allows a covered employee to request a review of specified determinations made during a reduction in force and the timeframes for making such a request.

3. **Analysis of effectiveness in meeting the objective**

The Department believes that the rule effectively meets its objective.

6. **Analysis of clarity, conciseness and understandability**

The Department considers the language of the rule to be clear, concise and understandable.

7. **Summary of the written criticisms of the rule within the last five years**

During the last five years, no written criticisms have been received.

14. **Proposed course of action**

The rule remains effective and no repeal or amendment is contemplated.

TITLE 2. ADMINISTRATION**CHAPTER 5. DEPARTMENT OF ADMINISTRATION - STATE PERSONNEL SYSTEM**

(Authority: A.R.S. § 41-761 et seq.)

Editor's Note: The Chapter Title was amended from Department of Administration, Personnel Administration to Department of Administration, State Personnel System. All Articles 1 through 9 repealed under exempt rulemaking at 18 A.A.R. 2782 effective September 29, 2012 (Supp. 12-4).

Editor's Note: Because the rules in this Chapter that were adopted under an exemption from the provisions of the Administrative Procedure Act (A.R.S. Title 41, Chapter 6) have been repealed, the Chapter is printed on white paper (Supp. 99-3).

Editor's Note: This Chapter contains rules which were repealed and adopted under an exemption from the provisions of the Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1997, Ch. 288, § 10. Exemption from A.R.S. Title 41, Chapter 6 means the Department of Administration did not submit these rules to the Governor's Regulatory Review Council for review; the Department did not submit notice of proposed rulemaking to the Secretary of State for publication in the Arizona Administrative Register; and the Department was not required to hold public hearings on these rules. Because this Chapter contains rules which are exempt from the regular rulemaking process, the Chapter is printed on blue paper.

Article 1 consisting of Sections R2-5-101 through R2-5-105; Article 2 consisting of Sections R2-5-201 through R2-5-210 and R2-5-213; Article 3 consisting of Sections R2-5-301 through R2-5-306; Article 4 consisting of Sections R2-5-401 through R2-5-411 and R2-5-413 through R2-5-418; Article 5 consisting of Sections R2-5-501 through R2-5-503; Article 6 consisting of Sections R2-5-601 through R2-5-605; Article 7 consisting of Sections R2-5-701 and R2-5-702; Article 8 consisting of Sections R2-5-801 through R2-5-803; and Article 9 consisting of Sections R2-5-901 and R2-5-902 adopted effective December 31, 1986 (Supp. 86-6).

Former Article 1 consisting of Sections R2-5-101 and R2-5-102; former Article 2 consisting of Sections R2-5-201 through R2-5-205; former Article 3 consisting of Sections R2-5-301 and R2-5-302; former Article 4 consisting of Sections R2-5-401 through R2-5-403; former Article 5 consisting of Sections R2-5-501 and R2-5-502; and former Article 6 consisting of Sections R2-5-601 through R2-5-605 repealed effective December 31, 1986 (Supp. 86-6).

ARTICLE 1. REPEALED

Article 1, consisting of Sections R2-5-101 through R2-5-105 repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

Section		
R2-5-101.	Repealed	4
R2-5-102.	Repealed	4
R2-5-103.	Repealed	4
R2-5-104.	Repealed	4
R2-5-105.	Repealed	4

ARTICLE 2. REPEALED

Section		
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R2-5-202.	Repealed	4
R2-5-203.	Repealed	4
R2-5-204.	Repealed	4
R2-5-205.	Repealed	4
R2-5-206.	Repealed	4
R2-5-207.	Repealed	4
R2-5-208.	Repealed	4
R2-5-209.	Repealed	4
R2-5-210.	Repealed	5
R2-5-211.	Repealed	5
R2-5-212.	Repealed	5
R2-5-213.	Repealed	5

ARTICLE 3. REPEALED

Section		
R2-5-301.	Repealed	5
R2-5-302.	Repealed	5
R2-5-303.	Repealed	5
R2-5-304.	Repealed	5
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R2-5-306.	Expired	5
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ARTICLE 4. REPEALED

Section		
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R2-5-405.	Repealed	6
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R2-5-408.	Repealed	6
R2-5-409.	Repealed	6
R2-5-410.	Repealed	6
R2-5-411.	Repealed	6
R2-5-412.	Repealed	6
R2-5-413.	Repealed	6
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R2-5-419.	Repealed	7
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R2-5-421.	Repealed	7
R2-5-422.	Repealed	7
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ARTICLE 5. REPEALED

Article 5, consisting of Sections R2-5-501 through R2-5-503 repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

Section		
R2-5-501.	Repealed	7
R2-5-502.	Repealed	7
R2-5-503.	Repealed	7

ARTICLE 6. REPEALED

Article 6, consisting of Sections R2-5-601 through R2-5-605, repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

Section		
R2-5-601.	Repealed	7
R2-5-602.	Repealed	7
R2-5-603.	Repealed	7
R2-5-604.	Repealed	8
R2-5-605.	Repealed	8

ARTICLE 7. REPEALED

Article 7, consisting of Sections R2-5-701 through R2-5-702, repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

Section		
R2-5-701.	Repealed	8
R2-5-702.	Repealed	8

ARTICLE 8. REPEALED

Article 8, consisting of Sections R2-5-801 through R2-5-803, repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

Section		
R2-5-801.	Repealed	8

R2-5-802. Repealed 8
 R2-5-803. Repealed 8

ARTICLE 9. REPEALED

Section
 R2-5-901. Repealed 8
 R2-5-902. Repealed 8
 R2-5-903. Repealed 8
 R2-5-904. Repealed 9

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 13
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Editor's Note: Articles 1 through 9, under Chapter 5, Department of Administration, Personnel Administration repealed at 18 A.A.R. 2782 effective September 29, 2012 (Supp. 12-4).

ARTICLE 1. REPEALED

R2-5-101. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Subsection (48) corrected to read "without prejudice" (Supp. 95-2). Subsection (55) amended to correct a printing error (Supp. 99-3). Amended by final rulemaking at 9 A.A.R. 1040, effective May 4, 2003 (Supp. 03-1). Amended by final rulemaking at 11 A.A.R. 4357, effective December 5, 2005 (Supp. 05-4). Amended by final rulemaking at 14 A.A.R. 1420, effective May 31, 2008 (Supp. 08-2). Amended by final rulemaking at 14 A.A.R. 2924, effective August 30, 2008

(Supp. 08-3). Amended by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-102. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Correction to subsection (A) as certified effective December 31, 1986 (Supp. 87-3). Amended by final rulemaking at 9 A.A.R. 1040, effective May 4, 2003 (Supp. 03-1). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-103. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 9 A.A.R. 1040, effective May 4, 2003 (Supp. 03-1). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-104. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section heading amended by final rulemaking at 9 A.A.R. 1040, effective May 4, 2003 (Supp. 03-1). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-105. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Amended by final rulemaking at 9 A.A.R. 1040, effective May 4, 2003 (Supp. 03-1). Amended by final rulemaking at 16 A.A.R. 685, effective June 5, 2010 (Supp. 10-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 2. REPEALED

R2-5-201. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective September 15, 1994 (Supp. 94-3). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-202. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-203. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Subsection (G) corrected to add omitted text following the word "error" (Supp. 95-2). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-204. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-205. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-206. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective September 15, 1994 (Supp. 94-3). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-207. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-208. Repealed**Historical Note**

New Section adopted by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-209. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Repealed effective August 2, 1989 (Supp. 89-3).

R2-5-210. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

R2-5-211. Repealed**Historical Note**

Adopted effective August 2, 1989 (Supp. 89-3). Amended effective September 15, 1994 (Supp. 94-3). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-212. Repealed**Historical Note**

Reserved Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-213. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Subsection (C)(2) corrected to read "job-related" in line 2; Amended effective April 20, 1995 (Supp. 95-2). Amended by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 3. REPEALED**R2-5-301. Repealed****Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 7 A.A.R. 2724, effective June 6, 2001 (Supp. 01-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-302. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 7 A.A.R. 2724, effective June 6, 2001 (Supp. 01-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-303. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Amended effective September 15, 1994 (Supp. 94-3). Amended effective March 4, 1997 (Supp. 97-1). Amended effective August 5, 1997 (Supp. 97-3).

Amended by final rulemaking at 7 A.A.R. 2724, effective June 6, 2001 (Supp. 01-2). Amended by final rulemaking at 16 A.A.R. 1129, effective August 7, 2010 (Supp. 10-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-304. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 5 A.A.R. 4417, effective November 2, 1999 (Supp. 99-4). Amended by final rulemaking at 7 A.A.R. 2724, effective June 6, 2001 (Supp. 01-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-305. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective April 20, 1995 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 2724, effective June 6, 2001 (Supp. 01-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-306. Expired**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 7 A.A.R. 2724, effective June 6, 2001 (Supp. 01-2). Section expired under A.R.S. § 41-1056(E) at 13 A.A.R. 1143, effective May 31, 2006 (Supp. 07-1).

R2-5-307. Expired**Historical Note**

Adopted as an emergency effective February 22, 1988, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 88-1). Emergency expired. New Section adopted effective March 10, 1993 (Supp. 93-1). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 3483, effective July 19, 2002 (Supp. 02-3).

ARTICLE 4. REPEALED**R2-5-401. Repealed****Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-402. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective July 6, 1993 (Supp. 93-3). Amended effective April 20, 1995 (Supp. 95-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-403. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended as an emergency effective August 19, 1988 pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 88-3). Emergency expired. Amended effective September 12, 1989 (Supp. 89-3). Amended effective September 14, 1990 (Supp. 90-3). Amended effective August 5, 1997 (Supp. 97-3). Amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 9 A.A.R. 2082, effective August 2, 2003 (Supp. 03-2). Amended by final rulemaking at 13 A.A.R. 1635, effective June 30, 2007 (Supp. 07-2). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-404. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Amended effective September 15, 1994 (Supp. 94-3). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-405. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective April 20, 1995 (Supp. 95-2). Amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-406. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-407. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-408. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-409. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-410. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Amended effective April 20, 1995 (Supp. 95-2). Amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-411. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Amended effective April 20, 1995 (Supp. 95-2). Amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-412. Repealed**Historical Note**

Adopted as an emergency effective August 19, 1988, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 88-3). Emergency expired. Amended and adopted as a permanent rule effective September 12, 1989 (Supp. 89-3). Rule citation in subsection (B) corrected (Supp. 95-2). Former Section R2-5-412 renumbered to R2-5-413; new Section R2-5-412 adopted by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-413. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Amended effective April 20, 1995 (Supp. 95-2). Former Section R2-5-413 renumbered to R2-5-414; new Section R2-5-413 renumbered from R2-5-412 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-414. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Former Section R2-5-414 renumbered to R2-5-415; new Section R2-5-414 renumbered from R2-5-413 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 4309, effective November 4, 2008 (Supp. 08-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-415. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Former Section R2-5-415 renumbered to R2-5-416; new Section R2-5-415 renumbered from R2-5-414 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Section repealed; new Section R2-5-415 renumbered from R2-5-423 and amended by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-416. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6) Amended effective August 2, 1989 (Supp. 89-3). Former Section R2-5-416 renumbered to R2-5-417; new Section R2-5-416 renumbered from R2-5-414 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 11 A.A.R. 4357, effective December 5, 2005 (Supp. 05-4). Amended by final rulemaking at 14 A.A.R. 1420, effective May 31, 2008 (Supp. 08-2). Section repealed by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1).

R2-5-417. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 and September 12, 1989 (Supp. 89-3). Former Section R2-5-417 renumbered to R2-5-418; new Section R2-5-417 renumbered from R2-5-416 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 11 A.A.R. 4357, effective December 5, 2005 (Supp. 05-4). Amended by final rulemaking at 14 A.A.R. 1420, effective May 31, 2008 (Supp. 08-2). Section repealed by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1). New Section made by final rulemaking at 17 A.A.R. 650, effective June 4, 2011 (Supp. 11-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-418. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective August 2, 1989 (Supp. 89-3). Former Section R2-5-418 renumbered to R2-5-419; new Section R2-5-418 renumbered from R2-5-417 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 1420, effective May 31, 2008 (Supp. 08-2). Section repealed by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1).

R2-5-419. Repealed**Historical Note**

Adopted effective August 2, 1989 (Supp. 89-3). Former Section R2-5-419 renumbered to R2-5-421; new Section R2-5-419 renumbered from R2-5-418 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 1420, effective May 31, 2008 (Supp. 08-2). Section repealed by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1).

R2-5-420. Repealed**Historical Note**

Adopted effective August 2, 1989 (Supp. 89-3). Former Section R2-5-420 renumbered to R2-5-422; new Section R2-5-420 adopted by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Section repealed by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1).

R2-5-421. Repealed**Historical Note**

Adopted effective February 28, 1991 (Supp. 91-1). Former Section R2-5-421 renumbered to R2-5-423; new Section R2-5-421 renumbered from R2-5-419 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 1420, effective May 31, 2008 (Supp. 08-2). Section repealed by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1).

R2-5-422. Repealed**Historical Note**

New Section R2-5-422 renumbered from R2-5-420 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000 (Supp. 00-4). Amended by final rulemaking at 14 A.A.R. 1420, effective May 31, 2008 (Supp. 08-2). Section repealed by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1).

R2-5-423. Renumbered**Historical Note**

New Section R2-5-423 renumbered from R2-5-421 and amended by final rulemaking at 6 A.A.R. 4093, effective October 3, 2000

(Supp. 00-4). Former R2-5-423 renumbered to R2-5-415 by final rulemaking at 15 A.A.R. 207, effective March 7, 2009 (Supp. 09-1).

ARTICLE 5. REPEALED

R2-5-501. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective April 20, 1995 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 5811, effective December 6, 2001 (Supp. 01-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-502. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective September 15, 1994 (Supp. 94-3). Amended by final rulemaking at 7 A.A.R. 5811, effective December 6, 2001 (Supp. 01-4). Amended by final rulemaking at 12 A.A.R. 1733, effective July 1, 2006 (Supp. 06-2). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-503. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective September 9, 1998 (Supp. 98-3). Amended by final rulemaking at 7 A.A.R. 5811, effective December 6, 2001 (Supp. 01-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 6. REPEALED

R2-5-601. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

R2-5-602. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

R2-5-603. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

R2-5-604. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

R2-5-605. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by final rulemaking at 6 A.A.R. 4572, effective November 13, 2000 (Supp. 00-4).

ARTICLE 7. REPEALED

R2-5-701. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective September 15, 1994 (Supp. 94-3). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-702. Repealed

Historical Note

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective September 15, 1994 (Supp. 94-3). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 8. REPEALED**R2-5-801. Repealed****Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Amended effective July 25, 1994 (Supp. 94-3). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-802. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-803. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

Editor's Note: Article 9 contained rules which were repealed and adopted under an exemption from the provisions of the Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1997, Ch. 288, § 10. Exemption from A.R.S. Title 41, Chapter 6 means the Department did not submit these rules to the Governor's Regulatory Review Council for review; the Department did not submit notice of proposed rulemaking to the Secretary of State for publication in the Arizona Administrative Register; and the Department was not required to hold public hearings on these rules. Temporary rules repealed and adopted under these Sections are repealed from and after June 30, 1999 (Supp. 98-2). Temporary rules repealed and adopted pursuant to Laws 1997, Ch. 288, § 10 were repealed from and after June 30, 1999 and the rule in effect before the adoption of the temporary rules became effective again upon the repeal of the temporary rules (Supp. 99-3).

ARTICLE 9. REPEALED**R2-5-901. Repealed****Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

Editor's Note: The following Section R2-5-902 was temporarily repealed and a new Section was temporarily adopted under an exemption from the provisions of the Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1997, Ch. 288, § 10. Exemption from A.R.S. Title 41, Chapter 6 means the Department did not submit these rules to the Governor's Regulatory Review Council for review; the Department did not submit notice of proposed rulemaking to the Secretary of State for publication in the Arizona Administrative Register; and the Department was not required to hold public hearings on these rules. Temporary rules adopted are repealed effective June 30, 1999 (Supp. 98-2). The temporary rules were repealed from and after June 30, 1999, pursuant to Laws 1997, Ch. 288, § 10; the rule in effect before the adoption of the temporary rules became effective again upon the repeal of the temporary rules (Supp. 99-3). Section R2-5-902 was repealed and a new Section was adopted by final rulemaking (Supp. 99-4).

R2-5-902. Repealed**Historical Note**

Adopted effective December 31, 1986 (Supp. 86-6). Section R2-5-902 temporarily repealed; new Section temporarily adopted effective April 23, 1998, under an exemption from the provisions of the Administrative Procedure Act pursuant to Laws 1997, Ch. 288, § 10. Rules adopted under this temporary Section are repealed effective June 30, 1999 (Supp. 98-2). Section repealed from and after June 30, 1999, pursuant to Laws 1997, Ch. 288, § 10; the rule in effect before the adoption of the temporary rules became effective again upon the repeal of the temporary rules (Supp. 99-3). Section repealed by final rulemaking at 5 A.A.R. 4529, effective November 2, 1999; new Section adopted by final rulemaking at 6 A.A.R. 20, effective December 7, 1999 (Supp. 99-4). Amended by final rulemaking at 13 A.A.R. 958, effective May 5, 2007 (Supp. 07-1). Amended by final rulemaking at 16 A.A.R. 2379, effective January 15, 2011 (Supp. 10-4). Section repealed by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5-903. Repealed**Historical Note**

Emergency rule adopted effective January 4, 1996, pursuant to A.R.S. § 41-1026, in effect for a maximum of 180 days (Supp. 86-6). Adopted with changes effective June 7, 1996 (Supp. 96-2). Section repealed by final rulemaking at 17 A.A.R. 650, effective June 4, 2011 (Supp. 11-2).

Editor's Note: The following Section was temporarily adopted under an exemption from the provisions of the Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1997, Ch. 288, § 10. Exemption from A.R.S. Title 41, Chapter 6 means the Department did not submit these rules to the Governor's Regulatory Review Council for review; the Department did not submit notice

of proposed rulemaking to the Secretary of State for publication in the Arizona Administrative Register; and the Department was not required to hold public hearings on these rules. Temporary rules adopted are repealed effective June 30, 1999 (Supp. 98-2). Section repealed from and after June 30, 1999, pursuant to Laws 1997, Ch. 288, § 10 (Supp. 99-3). New Section R2-5-904 adopted by final rulemaking (99-4).

R2-5-904. Repealed

Historical Note

New Section adopted effective April 23, 1998, under an exemption from the provisions of the Administrative Procedure Act pursuant to Laws 1997, Ch. 288, § 10. This Section is automatically repealed effective June 30, 1999 (Supp. 98-2). Section repealed from and after June 30, 1999, pursuant to Laws 1997, Ch. 288, § 10 (Supp. 99-3). New Section adopted by final rulemaking at 6 A.A.R. 20, effective December 7, 1999 (Supp. 99-4). Formatting errors corrected (Supp. 08-3). Section repealed by final rulemaking at 16 A.A.R. 2379, effective January 15, 2011 (Supp. 10-4).

SUBCHAPTER A. COVERED AND UNCOVERED EMPLOYEES

ARTICLE 1. GENERAL

R2-5A-101. Definitions

In this subchapter, the following words and phrases have the defined meanings unless otherwise clearly indicated by the context:

“Agency head” means the chief executive officer of a state agency, or designee.

“Appeal” means a covered employee’s request for a review of a disciplinary action by the State Personnel Board under A.R.S. § 41-782 or the Law Enforcement Merit System Council under A.R.S. § 41-1830.16, as applicable.

“Applicant” means a person who seeks appointment to a position in state employment.

“Appointing authority” means the person or group of persons authorized by law or delegated authority to make appointments to fill positions. A.R.S. § 41-741(1)

“Appointment” means the offer to and the acceptance by a candidate of a position in a state agency.

A.R.S. § 41-741(2)

“Base salary” means an employee’s salary excluding supplemental pay provided by R2-5A-403, overtime pay or other pay allowance provided by law.

A.R.S. § 41-741(3)

“Business day” means the hours between 8:00 a.m. and 5:00 p.m., Monday through Friday, excluding observed state holidays.

“Candidate” means a person whose education, experience, competencies and other qualifications meet the requirements of a position and who may be considered for employment.

“Cause” means any of the reasons for disciplinary action provided by A.R.S. § 41-773 or these rules.

A.R.S. § 41-741(4)

“Child” means, for purposes of R2-5A-B603, pertaining to sick leave, and R2-5A-B605 pertaining to bereavement leave, a natural child, adopted child, foster child, or stepchild.

“Class” means a group of positions with the same title and grade because each position in the group has similar duties, scope of discretion and responsibility, required qualifications, or other job-related characteristics.

“Class series” means a group of related classes as listed by the Arizona Department of Administration, Human Resources Division.

“Class specification” means a description of the type and level of duties and responsibilities of the positions assigned to a class.

“Competencies” means knowledge, skills, abilities, behaviors and other characteristics that contribute to successful job performance and the achievement of organizational results.

A.R.S. § 41-741(5)

“Covered position” means a position in the covered service.

“Covered service” is defined in A.R.S. § 41-741 and means that employment status conferring rights of appeal as prescribed in A.R.S. §§ 41-782 and 41-783 or A.R.S. § 41-1830.16, as applicable.

“Days” means calendar days, unless otherwise stated.

“Demotion” means a change in the assignment of an employee from a position in one class to a position in another class that has a lower grade.

“Department” means the Arizona Department of Administration.

A.R.S. § 41-741(7)

A.R.S. § 41-741(8)

“Employing agency” means the agency where the employee is employed or, if an applicant, the agency to which the person has applied.

“Essential job function” means a fundamental job duty of a position that an applicant or employee must be able to perform, with or without a reasonable accommodation.

“FLSA” means the federal Fair Labor Standards Act.

“FLSA exempt” means a position that is not entitled to overtime compensation under the FLSA.

“FLSA non-exempt” means a position that is entitled to overtime compensation under the FLSA.

“FMLA” means the federal Family and Medical Leave Act.

A.R.S. § 41-741(9)

“Grade” means the numeric identifier associated with one or more pay ranges, used to determine the internal worth of a class relative to other classes.

“Manifest error” means an act or failure to act that is, or clearly has caused, a mistake.

“Parent” means, for purposes of R2-5A-B602, pertaining to annual leave, R2-5A-B603, pertaining to sick leave, and R2-5A-B605, pertaining to bereavement leave, a birth parent, adoptive parent, stepparent, foster parent, grandparent, parent-in-law, or anyone who can be considered “in loco parentis.”

“Part-time” means employment scheduled for less than 40 hours per week.

“3/4 time” means employment regularly scheduled for at least 30 hours but fewer than 40 hours per week.

“1/2 time” means employment regularly scheduled for at least 20 hours but fewer than 30 hours per week.

“1/4 time” means employment regularly scheduled for at least 10 hours but fewer than 20 hours per week.

“Pay status” means an employee is receiving pay for work or for a compensated absence.

“Premium/contribution” means the amount paid in exchange for insurance coverage. Depending on the type of coverage, the premium/contribution is paid by the employee, the state, or a combination of both.

“Promotion” means a change in assignment of an employee from a position in one class to a position in another class that has a higher grade.

“Reallocation” means changing the allocation of a position to a different class if a material and permanent change in duties or responsibilities occurs.

“Reversion” means the return of a covered employee on promotional probation to a position in the class in which the employee held permanent status immediately before the promotion or to a similar position in another class at the same grade as the class the employee held permanent status if the employee possesses the qualifications for that position.

A.R.S. § 41-741(13)

“Special assignment” means the temporary assignment, for up to six months, of the duties and responsibilities of another position to an employee in the same agency.

A.R.S. § 41-741(14)

“State Personnel Board” is defined in A.R.S. § 41-741 and means the board established by A.R.S. Title 41, Chapter 4, Article 6.

“State Personnel System” is defined in A.R.S. § 41-741 and means all state agencies and employees of those agencies that are not exempted by the provisions of A.R.S. Title 41, Chapter 4, Article 4.

“State service” is defined in A.R.S. § 41-741 and means all offices and positions of employment in state government that, before September 29, 2012, were subject to the provisions of A.R.S. Title 41, Chapter 4, Articles 5 and 6 that were in effect before September 29, 2012.

A.R.S. § 41-741(18)

“Temporary appointment” means an appointment made for a maximum of 1,500 hours worked in any agency in each calendar year.

“Transfer” means the movement of an employee from one position to another position in the same or an equivalent grade. A.R.S. § 41-741(19)

A.R.S. § 41-741(20)

“Working day” or “working hours” means a day or the hours an employee is regularly scheduled to work.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-102. General Provisions

- A. Authority of Director.**
1. The Director may approve, modify or deny a request, plan or proposal submitted by a state agency for review or when the Director's approval is required by rule.
 2. The Director may audit an agency's personnel policies and procedures at any time. If the Director determines that the agency's policies or procedures are inconsistent with these rules or are inconsistent with the procedures or guidelines issued by the Director, the Director may direct the agency head to modify them to achieve consistency or to discontinue them.
- B. Delegation of authority.**
1. The Director may, in writing, delegate authority to an agency head as consistent with legal requirements.
 2. The Director may review or audit delegated authority to determine compliance with laws, rules, and policies.
 3. Unless otherwise stated by law, or in these rules, an agency head may delegate authority granted to the agency head in these rules.
- C. Availability of funds.** The granting of any compensation under these rules is contingent upon the availability of funds, as determined by an agency head and the Director.
- D. Service of notice.** If a notice or document is to be given to a person or agency, the notice or document may be served personally or mailed to the last known residence or current business address of the person or agency. Unless otherwise provided by law or these rules, service is complete upon personal delivery or mailing.
- E. Employee handbook.** The Director may publish an employee handbook outlining pertinent rules and regulations and make the handbook available to all employees. If published, the employee handbook shall serve as the official handbook for all employees in the State Personnel System. An agency head may supplement the employee handbook with agency specific policies and directives.
- F. Employment contracts.** Unless otherwise provided by law, an appointing authority shall not execute an employment contract with any state employee.
- G. Correction of errors.** Only the Director, or designee, has authority to determine whether a manifest error exists and to correct the manifest error.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-103. Applicability

- A. General.** Except as provided in A.R.S., Title 41, Chapter 4, Article 4 and Article 5, or otherwise stated in rule, the rules in this subchapter are applicable to covered and uncovered positions, applicants for covered and uncovered positions and covered and uncovered employees in the State Personnel System. An employee who violates or fails to comply with these rules may be disciplined or separated from state employment. Any such actions involving a covered employee shall be in accordance with the rules in Subchapter B, Article 3.
- B. Temporary procedures.** The Director may:
1. Unless otherwise prescribed by statute, waive any rule and implement temporary procedures if the Director determines that essential public services are being hampered or it is in the best interest of the state.
 2. Implement a temporary pilot project to improve efficiency, productivity, or accountability in the State Personnel System. The project may include an activity or procedure that is not in accordance with these rules and shall not exceed two years in duration.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-104. Prohibition Against Discrimination, Harassment and Retaliation

- A. General.** Agencies shall comply with all federal and state anti-discrimination laws. Agencies shall not unlawfully discriminate against any individual with regard to the terms and conditions of employment, including hiring, pay, leave, insurance benefits, retention, and rehiring. The information provided in this rule is intended to serve as a summary of agencies' and employees' obligations with regard to compliance with applicable federal and state laws, rules and regulations. Nothing in these rules shall be construed as providing rights in excess of, or in addition to those authorized under federal laws and Arizona Revised Statutes.
- B. Equal Employment Opportunity.** Each agency shall provide equal employment opportunity for all individuals regardless of race, color, national origin, religion, age, disability, genetic information, sex, pregnancy, military or veteran status, or any other status protected by federal law, state law, or regulation. It is the policy of this state that all individuals are treated in a fair and non-discriminatory manner throughout the application and employment process.
- C. Harassment Prohibited.** Harassment of a sexual nature or harassment based on race, color, national origin, religion, age, disability, genetic information, sex, pregnancy, military or veteran status, or any other status protected by federal law, state law, or regulation is prohibited. An agency shall prohibit the unlawful harassment of any employee in the course of the employee's work by supervisors, coworkers, or third parties, such as vendors or customers. Any employee who engages in unlawful harassment may be subject to disciplinary action, up to and including termination of employment.
- D. Protection from Retaliation.** The state prohibits retaliation against anyone for raising a concern about, assisting in an investigation of, or filing a complaint concerning unlawful discrimination or unlawful harassment.
- E. Complaints.**
1. An applicant for state employment who has a complaint alleging discrimination or harassment may file a complaint under the procedures in R2-5A-308.
 2. It is every employee's responsibility to promptly bring any allegation of discrimination, harassment or retaliation to the attention of the employing agency. Such complaints shall be filed under the procedures established under Article 9.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-105. Records

- A. Definitions.** For the purposes of this Section, “record” generally refers to a paper document; however, a document may be maintained electronically.
- B. Application Materials.**
1. An agency head shall maintain and keep confidential all resumés, applications, tests, test results, records, correspondence, and other documents used to seek state employment. The agency head shall not release any materials that the agency head determines would compromise the application process for future applicants and shall restrict the review of the applicant's application materials to:
 - a. The applicant,
 - b. An individual who has written authorization from the applicant,
 - c. State officials in the normal line of duty, or,
 - d. Officials acting in response to court orders or subpoenas.
 2. The Director, or designee, shall ensure that when a person makes a public records request under A.R.S. Title 39, Chapter 1, Article 2 for applicant information:
 - a. Information shall only be provided if the position under recruitment is a high-level position and the public has a legitimate interest in the names of persons being seriously considered for the position, as determined by the Director; and
 - b. Only the names and resumés of the final candidates for the position as determined by the Director shall be released.
- C. Official Personnel File.**
1. An employee's official personnel file is the official record and documentation of the employee's employment.
 2. An agency head shall, for each agency employee, maintain an official personnel file that contains:
 - a. A copy of the job application for the employee's current position;
 - b. A copy of all performance appraisals completed as required by Article 7;
 - c. Personnel action forms that authorize changes in employment status, position, classification, pay, or leave status;
 - d. Letters of commendation as established by agency policy; and
 - e. Correspondence consisting of:
 - i. Letters of reprimand, suspension, demotion or dismissal;
 - ii. Acknowledgments of receipt of letters of reprimand or other disciplinary communications; and
 - iii. Employee objections or responses to correspondence described in subsection (C)(2)(e)(i) that are not filed as complaints under Article 9 or grievances under Subchapter B, Article 4, if the objection or response is received within 30 calendar days of the date of the disciplinary action or letter of reprimand.
 3. For the purpose of this subsection, an official is an individual who provides identification verifying that the individual is exercising powers and duties on behalf of the chief administrative head of a public body. An agency head shall limit access to an employee's official personnel file to:
 - a. The employee;
 - b. The employee's attorney or an individual who has written authorization from the employee to review the personnel file;
 - c. Agency personnel designated by the agency head as having a need for the information;
 - d. A Department official in the normal line of duty;
 - e. An official acting in response to a court order or subpoena;
 - f. An official of an agency to which the employee has applied; and
 - g. An official of an agency of the federal government, state government, or political subdivision, if the agency head of the employing agency deems access to the file to be appropriate.
 4. When an employee moves from one state agency to another, the gaining agency shall request that the losing agency forward the employee's official personnel file to the gaining agency. The losing agency shall forward the file within 20 business days of the receipt of the request.
 5. When a former employee returns to state employment within five years of the former employee's separation to an agency other than the agency in which the employee was last employed, the gaining agency shall request that the last agency forward the employee's official personnel file. The last agency shall forward the file within 20 business days of the receipt of the request.
- D. Disclosure of information.**
1. Definitions. For the purposes of this subsection:
 - a. “Disciplinary actions” means letters of reprimand, suspension, demotion or dismissal.
 - b. “Records that are reasonably necessary or appropriate to maintain an accurate knowledge of the employee's disciplinary actions” means the correspondence listed in subsection (D)(1)(a) and includes an official notice of charges of misconduct as applicable to covered employees, the final disciplinary letter, and any responses related to complaints, grievances or appeals upholding, amending, or overturning the discipline.
 - c. “Employee responses” means any written documents, submitted and signed by the employee, either:
 - i. In response to an official notice of charges of misconduct;
 - ii. As a formal complaint filed under the provisions of Article 9 or a formal grievance under Subchapter B, Article 4, of these rules pertaining to a specific disciplinary action; or
 - iii. As an objection to a specific disciplinary action and contained in the employee's official personnel file under subsection (C)(2)(e)(iii).

2. Personnel records are confidential and an agency head shall ensure that except as provided in subsection (C)(3), only the following information about a current or former employee is provided to any person making a public records request under A.R.S. Title 39, Chapter 1, Article 2.
 - a. Name of employee;
 - b. Date of employment;
 - c. Current and previous class titles and dates of appointment to the class;
 - d. Current and previous agencies to which the employee has been assigned and the location of the main office for each agency;
 - e. Current and previous salaries and dates of each change;
 - f. Name of employee's current or last known supervisor; and
 - g. Records that are reasonably necessary or appropriate to maintain an accurate knowledge of the employee's disciplinary actions, including the employee responses to all disciplinary actions, unless providing this information is contrary to law.
- E. Insurance and medical records. An agency head:
 1. May maintain group insurance enrollment forms in an employee's official personnel file for an employee hired prior to September 29, 2012.
 2. Shall maintain in a separate file that is not part of the employee's official personnel file:
 - a. Medical records, and
 - b. Group insurance enrollment forms for an employee hired on or after September 29, 2012.
- F. Employment eligibility records. An agency head shall retain I-9 forms and other documents required by law to prove employment eligibility in a separate file that is not part of the employee's official personnel file.
- G. Employee access to files. An employee has the right to review only the employee's official personnel file.
- H. Recordkeeping Requirements. An agency head shall ensure that agency recruitment and employee records are maintained in accordance with the General Records Retention Schedule for Human Resources/Personnel Records published by and on file with the Secretary of State, Arizona State Library, Archives and Public Records.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 2. CLASSIFICATION SYSTEM

R2-5A-201. Classification Plan

- A. General. The Director shall group positions into classes based on similarities of duties and responsibilities. All positions are assigned a class specification with a specific title. An agency head may not appoint, transfer, promote, or demote an employee, or make any change in salary for any position until the position is allocated to a class.
- B. Class title. An agency head shall use the class title of a position to designate the position in all budget estimates, payrolls, vouchers, and communications in connection with personnel processes.
- C. Class specification. A class specification indicates the kinds of positions to be allocated to the class, as determined by the duties and responsibilities described for that class. Each class specification shall contain a statement of the minimum education, experience, competencies, and other qualifications required to perform the work. Required postsecondary education shall be attained in an institution that meets the standards established by an accrediting agency recognized by the U.S. Department of Education.
- D. Position description. An agency head shall ensure that every position in the agency has a completed position description describing the current duties, responsibilities, and essential job functions specific to the position.
- E. Allocation. The Director shall place every position in a class based on its duties and responsibilities.
- F. Reallocation. Upon completion of a review of a position, the Director may determine that the position should be placed in a different class.
- G. Regrade. Upon completion of a review of a classification, the Director may determine that the class should be placed in a different grade.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-202. Change in Classification

- A. Change in classification plan. The Director may establish new classes and divide, combine, alter, or abolish existing classes, grades, or both, in consultation with affected agency heads.
- B. Change in job duties.
 1. An employee in a position or the agency head may file a written request with the Director for review of the classification of the position. The request shall contain an updated position description, a specific explanation of how and when the position's duties and responsibilities have changed and the reasons why the current classification does not match these job duties.
 2. If a material and permanent change takes place in the duties and responsibilities of a position, the agency head shall report this change to the Director in an updated position description. The Director may order a reallocation of the position. The employee in the position at the time of reallocation shall continue to serve in the position.
- C. Effective date. The effective date of a change in classification shall be the first day of the pay period immediately following the Director's determination, unless the Director authorizes an exception.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-203. Expired**Historical Note**

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Section expired under A.R.S. § 41-1056(J) at 23 A.A.R. 2489, effective August 8, 2017 (Supp. 17-3).

ARTICLE 3. RECRUITMENT, SELECTION AND APPOINTMENT**R2-5A-301. General**

An agency head shall follow the requirements outlined in this Article to identify and appoint qualified candidates to fill vacancies. The Director shall establish and maintain a centralized employment system that includes a job board for announcing vacancies in state employment, applicant tracking and candidate identification. The Director shall establish procedures for state agencies to request approval for transportation or other travel expenses or moving expenses provided by A.R.S. § 35-196.01 for out of state candidates.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

R2-5A-302. RecruitmentA. Job posting.

1. Unless exempted by A.R.S. Title 41, Chapter 4, Article 4, an appointing authority shall post an open position to the state's centralized job board. This includes recruitments open to only employees currently employed by the agency, to state employees currently employed in any state agency, or the general public. An agency head may authorize an exception to the job posting requirement for a position in an individual case. Any exceptions shall be documented by the agency head and subject to audit by the Director.
2. In addition to posting to the state's centralized job board, an appointing authority may post an open position in a publication or to a commercial job posting board or both, in compliance with applicable procurement rules.

B. Application form.

1. A candidate for a position shall complete the standardized application form developed by the Director.
2. In addition to the standardized application form, an agency head may develop supplemental application procedures and forms specific to the agency or to a certain class or classes within the agency.

C. Preferences.

1. The state will provide preference to qualified veterans and disabled veterans seeking employment with the state.
2. For positions in the covered service, preference points authorized by A.R.S. § 38-492 shall be added to an applicant's grade on any assessment or evaluation that results in a numeric grade after the final grade is determined, if a passing grade is earned without the addition of preference points. Preference points shall not be applied to promotional examinations. If an evaluation does not result in a numeric grade, preference shall be given by granting applicable preference codes to qualified applicants.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-303. Reference and Background Checks

A candidate may be required to furnish, at the candidate's own expense, evidence of education or other qualification. The appointing authority is responsible for verifying education, work experience, applicable license or licenses and references provided by candidates on the application form and in interviews. An appointing authority shall not conduct a criminal background check or a credit check on a candidate unless the agency has statutory or executive order authority to conduct such a check.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-304. Qualifications of Selected Candidate

An agency head shall ensure that any candidate selected for hire meets the established qualifications for the position filled.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-305. Employment of Relatives

- A. Relationship to supervisors. An individual shall not be employed in a position if the immediate supervisor of the individual is related within the third degree of affinity (marriage) or consanguinity (blood), or by adoption.
- B. Relationship to other employees. An individual shall not be employed in a position if the individual is related within the third degree to an employee who currently occupies a position under the same immediate supervisor.
- C. Exceptions. The Director may grant an exception to the prohibitions in subsections (A) and (B) if there is no other qualified person for the position at the location.
- D. Relationship to subordinate employees. A supervisor or manager at any level shall not make an employment decision specifically benefitting any individual who is related within the third degree, unless an exception under subsection (C) has been granted.
- E. Relationship to interviewer or interview panel members. An employee shall not interview or serve on an interview panel of any job candidate if the candidate is related within the third degree.
- F. Definition. For the purpose of this Section, persons related within the third degree include a spouse, child, parent, grandchild, grandparent, sister, brother, great grandchild, great grandparent, aunt, uncle, niece, nephew or first cousin.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-306. Hiring Requirements

Agencies shall comply with federal and state law, including the verification of employment eligibility pursuant to A.R.S. § 23-214. An agency head shall ensure the completion of the Form I-9 and the employment eligibility verification process for all new hires.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-307. Appointment

A. General. Except as provided in A.R.S. Title 41, Chapter 4, Articles 4 and 5, all appointments shall be at will uncovered. An agency head may appoint a current state employee who accepts a change in assignment or an external candidate in accordance with these rules and the procedures established by the Director.

B. Types of Appointment.

1. A regular appointment may be:
 - a. Full-time employment;
 - b. Part-time employment;
 - c. Subject to funding availability, such as federal or grant funding; or
 - d. To a trainee position.
2. A temporary appointment may be made for a recurring period of time up to a maximum of 1500 hours in any one position per agency each calendar year. A temporary appointment employee may work full time for a portion of the year, intermittently, on a seasonal basis, or on an as needed basis. An employee in a pool classification is considered a temporary appointment.
3. An agency head may place an employee on special assignment within the agency. A special assignment may be made non-competitively and for up to 6 months with the concurrence of the agency head of the employing agency and the Director. A special assignment shall not exceed 6 months unless extended by the Director. An agency head shall not make successive special assignments of the same person to the same class.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

R2-5A-308. Applicant Complaint

An applicant who has a complaint alleging discrimination or harassment relating to the procedures used in the selection or evaluation process shall submit the applicant complaint to the agency human resources representative within 90 days of the action giving rise to the complaint. The agency human resources representative shall evaluate the complaint and notify the applicant of the final action to be taken.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 4. COMPENSATION SYSTEM**R2-5A-401. Salary Plans**

A. General. The Director shall establish a salary plan. The salary plan shall allow for the following:

1. Minimum and maximum rates of pay for classes outlined in the classification plan.
2. Salary adjustments, including adjustments to base salary and pay supplements and incentives, including add-ons to base salary.

B. Alternative salary plan. The Director may establish a special salary plan or pay practice determined to be the prevailing practice in the labor market and in the best interest of the state.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

Administration

A. General. The Director shall develop procedures for salary administration for use by all agencies when setting the salary of an employee. In setting an employee's salary, an agency head shall consider such factors as the employee's education, experience, skills, performance, and current or former salary, as well as the current salaries of employees in the same class in the agency and the relative experience and performance of those employees.

B. Classes. The Director shall assign each class to a salary range and to a grade.

C. Salary. The base salary of an employee shall be not less than the minimum nor more than the maximum of the salary range of the class to which the employee's position is allocated, except as provided by these rules.

D. Salary adjustment. The salary used to compute a salary adjustment is the employee's base salary. Following an adjustment to the base salary, an agency shall add to the new rate of pay any special pay supplement still valid.

E. New hire starting rate. An agency head may offer a salary to a new hire within the salary range of the class to which the employee is being appointed in accordance with the procedures and guidelines published by the Director, unless an exception is approved by the Director.

Salary

- F.** Promotion. An employee who has a change in assignment from a position in one class to a position in another class having a higher grade shall receive a salary increase as determined by the agency head in accordance with the procedures and guidelines published by the Director, unless an exception is approved by the Director.
- G.** Demotion.
1. An employee who has a change in assignment from a position in one class to a position in another class having a lower grade, whether voluntary or involuntary, shall receive a salary decrease as determined by the agency head in accordance with the procedures and guidelines published by the Director, unless an exception is approved by the Director.
 2. A demoted employee shall not be eligible for an increase to base salary for six months after the effective date of the demotion to the new position, other than a salary increase that is legislatively mandated. After six months, the employee may become eligible for a salary increase only after a performance evaluation in the new position for which the employee received an overall rating of "meets expectations" or higher.
- H.** Lateral transfer. An employee who has a change in assignment from a position in one class to a position in another class having the same grade shall receive no increase in salary, unless an exception is approved by the Director. The Director may approve a salary increase based upon documentation of recruitment difficulties to fill the position, specific needs identified by the agency, or the employee's qualifications. Transferred employees are not eligible for increases to base salary during their first six months in the new job unless approved by the Director. An employee who transfers to another agency may become eligible for a salary increase only after a performance evaluation in the new position for which the employee received an overall rating of "meets expectations" or higher.
- I.** Reversion of covered employee. A covered employee who is reverted under the rules in Subchapter B shall be paid the same salary as that paid prior to the promotion, plus the percentage or dollar amount of increase of an intervening general salary adjustment for which the employee was eligible.
- J.** Job reallocation.
1. The base salary of an employee in a position that is reallocated to a class in a higher pay range may receive a salary increase in accordance with the procedures and guidelines published by the Director. If increasing the base salary of an employee would result in a salary level that is less than the minimum or greater than the maximum salary of the pay range, the employee's salary shall be the minimum or the maximum salary of the pay range, respectively.
 2. The base salary of an employee in a position that is reallocated to a class with the same or lower pay range shall remain the same provided that the employee's salary is within the pay range of the position. If the employee's salary is less than the minimum of the salary range or greater than the maximum salary of the new pay range, the employee's salary shall be the minimum salary or the maximum salary of the new pay range, respectively.
- K.** Job regrade.
1. The base salary of an employee in a class that is reassigned to a higher grade shall be adjusted by the amount determined by the Director. If adjusting the base salary of an employee would result in a salary level that is less than the minimum or greater than the maximum salary of the pay range, the employee's salary shall be the minimum or the maximum salary of the pay range, respectively.
 2. The base salary of an employee in a class that is reassigned to a lower grade shall remain the same provided that the employee's salary is at or above the minimum salary of the new pay range of the class, and may be greater than the maximum salary of the pay range. If the employee's salary is greater than the maximum, the employee is not eligible for an increase to base pay until the employee's salary is less than the maximum salary of the new pay range.
- L.** Merit increases.
1. The Director shall establish guidelines for merit increases to base pay.
 2. Merit increases shall be available:
 - a. To uncovered employees.
 - b. To covered employees only if such increases are legislatively appropriated.
 3. Subject to the guidelines established by the Director:
 - a. Merit increases may be implemented at the discretion of the agency head.
 - b. Merit increases are subject to the availability of funding and must be within an agency's appropriation unless otherwise legislatively appropriated.
 4. An agency head shall report to the Director on the utilization of merit increases pursuant to the reporting requirements in the guidelines established by the Director.
- M.** Legislatively-appropriated salary adjustments. Subject to legislative appropriation, the Director shall determine employee eligibility and criteria for salary adjustments.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

R2-5A-403. Supplemental Pay

- A.** General. Supplemental pay is in addition to an employee's base pay. The salary of an employee may exceed the maximum salary of the pay range for the employee's class if the excess amount is due to the receipt of supplemental pay.
- B.** Shift differential. The Director may authorize a shift differential to be paid to an employee on other than a day shift. The Director shall establish a competitive shift differential rate periodically based on an annual survey of the market place. Employees in the same class in the same agency who work on the same shift shall receive the same shift differential pay.

- C. Special assignment. An employee on a special assignment shall remain in the employee's current position with no change to base salary. If the classification to which the employee is on a special assignment is a higher grade, the employee shall be provided a conditional pay supplement in an amount that, when added to the employee's base salary, would be within the range of the higher classification. If the classification to which the employee is on a special assignment is the same or a lower grade, the employee shall not be eligible for a conditional pay supplement while on special assignment. Any conditional pay supplement received by the employee for the special assignment shall be discontinued at the conclusion of the special assignment.
- D. Conditional pay supplements. The Director may establish conditional pay supplements. A conditional pay supplement provides additional compensation to an eligible employee and shall be discontinued when the qualifying conditions no longer apply. An employee may be awarded multiple conditional pay supplements. A conditional pay supplement does not:
1. Change base salary;
 2. Provide a basis for the computation of a salary increase; or
 3. Provide a basis for the computation of pay upon an employee's promotion, demotion or transfer.
- E. Variable pay.
1. The Director may establish variable pay strategies determined to be the prevailing practices in the market and in the best interest of the state.
 2. If the Director establishes variable pay strategies, the Director shall establish guidelines for the administration of variable pay.
 3. Variable pay shall be available only to uncovered employees, except for employees in covered positions classified as Correctional Officers I, II, or III, or Community Corrections Officers, as specified in the guidelines established by the Director.
 4. Subject to the guidelines established by the Director:
 - a. Variable pay strategies may be implemented at the discretion of the agency head.
 - b. Variable pay strategies are subject to the availability of funding and must be within an agency's appropriation unless otherwise legislatively appropriated.
 5. An agency head shall report to the Director on the utilization of variable pay strategies pursuant to the reporting requirements in the guidelines established by the Director.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-404. Overtime

- A. Approval of overtime work. An agency head may require that an employee work overtime and:
1. Shall approve in advance all work in excess of 40 hours per workweek or in excess of a work period as defined by the Fair Labor Standards Act (FLSA). FLSA Regulations 29 CFR 553 and 778 (July 2012), are incorporated by this reference and on file with the Department and available from the U.S. Government Printing Office, 732 North Capitol Street N.W., Washington, D.C. 20401. This incorporation by reference contains no future editions or amendments; and
 2. May assign an employee who volunteers for overtime before mandatory overtime is required.
- B. Exemptions. The Director shall determine exemptions from minimum wage and maximum hour requirements in accordance with the Fair Labor Standards Act, 29 U.S.C. 213, January 2004, incorporated by this reference and on file with the Department and available from the U.S. Government Printing Office, 732 North Capitol Street N.W., Washington, D.C. 20401. This incorporation by reference contains no future editions or amendments.
- C. Non-exempt employees.
1. An agency shall compensate an employee in a non-exempt position who works in excess of 40 hours per workweek or in excess of a work period as defined by the FLSA by either:
 - a. Additional pay at the rate of 1 1/2 times the employee's regular rate for each excess hour worked, or
 - b. Compensatory leave at the rate of 1 1/2 hours for each excess hour worked.
 2. An employee shall select either overtime pay or compensatory leave for overtime compensation. If the employee selects both overtime pay and compensatory leave, the agency head shall determine which applies. If an employee's compensatory leave balance reaches the maximum allowed in subsection (E), the agency head shall compensate the employee by overtime pay.
- D. Exempt employees.
1. Unless otherwise provided by statute or as specified in subsection (D)(2), an employee who is in a position that is exempt from the FLSA is excluded from receiving either overtime pay or compensatory leave.
 2. An employee who is in a position that is exempt from the FLSA who works in excess of 40 hours per workweek or in excess of an established work period shall receive for each hour of overtime worked, either one hour of additional pay or earn one hour of compensatory leave, at the option of the agency head, if the employee is either:
 - a. Engaged in law enforcement activities;
 - b. Engaged in firefighting activities; or
 - c. A full authority peace officer as certified by the Arizona Peace Officer Standards and Training Board, is in a position that requires such certification, and is in the covered service.
 3. An exempt employee may earn compensatory leave as provided by subsection (D)(2) until the employee's compensatory leave balance reaches the maximum allowed in subsection (E). When the maximum balance is reached, an agency head shall compensate the employee by overtime pay for excess hours worked.
 4. For the purposes of this subsection, "engaged in law enforcement activities" has the same meaning as defined in A.R.S. Title 23, Chapter 2, Article 9.
- E. Maximum accumulation. The maximum number of hours of accumulated compensatory leave is:
1. 480 hours for an employee who works in a public safety activity or an emergency response activity, or

2. 240 hours for an employee who works in any other activity.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-405. Tuition Reimbursement for Education

- A. General. A state agency may assist an employee in the pursuit of educational goals by providing tuition reimbursement.
- B. Procedures. Prior to granting tuition reimbursement, an agency shall establish a policy which shall include the following conditions:
 1. The educational program will provide a benefit to the state.
 2. The employee shall successfully complete the required course work or the educational requirements of the program in order to receive reimbursement.
 3. Education assistance may not exceed \$5,250 per employee in any one calendar year unless approved in advance by the Director.
 4. An employee who receives education assistance may be required to return all or a portion of the amount received if the employee does not remain employed with the agency for a defined period of time, as specified in the agency's policy.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-406. Reimbursement for Relocation

An agency head may reimburse reasonable relocation expenses to a current employee for a management initiated geographical transfer of more than 50 miles from the employee's current work site in accordance with the procedures established by the Director.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 5. CONDITIONS OF EMPLOYMENT

R2-5A-501. Standards of Conduct

- A. Required conduct. A state employee shall at all times:
 1. Comply with federal and state laws and rules, statewide policies and employee handbook, and agency policies and directives;
 2. Maintain high standards of honesty, integrity, and impartiality, free from personal considerations, or favoritism;
 3. Be courteous, considerate, and prompt in interactions with and serving the public and other employees; and
 4. Conduct himself or herself in a manner that will not bring discredit or embarrassment to the state.
- B. Prohibited conduct. A state employee shall not:
 1. Use his or her official position for personal gain, or attempt to use, or use, confidential information for personal advantage;
 2. Permit himself or herself to be placed under any kind of personal obligation that could lead a person to expect official favors;
 3. Perform an act in a private capacity that may be construed to be an official act;
 4. Accept or solicit, directly or indirectly, anything of economic value as a gift, gratuity, favor, entertainment, or loan that is, or may appear to be, designed to influence the employee's official conduct. This provision shall not prohibit acceptance by an employee of food, refreshments, or unsolicited advertising or promotional material of nominal value;
 5. Directly or indirectly use or allow the use of state equipment or property of any kind, including equipment and property leased to the state, for other than official activities unless authorized by written agency policy or as otherwise allowed by these rules;
 6. Inhibit a state employee from joining or refraining from joining an employee organization; or
 7. Take disciplinary or punitive action against another employee that impedes or interferes with that employee's exercise of any right granted under the law or these rules.
- C. Consequences of non-compliance. An employee who violates the standards of conduct requirements listed in subsection (A) or (B) may be disciplined or separated from state employment. Any such actions involving a covered employee shall be in accordance with the rules in Subchapter B, Article 3.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

R2-5A-502. Hours of Work

- A. State work week. The state work week is the period of seven consecutive days starting Saturday at 12:00 a.m. and ending Friday at 11:59 p.m. An agency head may apply to the Director for an exception from the work week period for all or part of an agency workforce. The Director may grant an exception from the work week period to promote efficiency in the State Personnel System.
- B. Hours of employment.
 1. An agency head shall determine the hours of employment in the work week for each agency employee.
 2. An agency head may provide for breaks during the work period consistent with carrying out the duties of the agency.
 3. An agency head may require an employee to work overtime.
- C. Flexible work options. An agency head may offer a flexible 40-hour work week option to an employee if the agency head determines the agency's services can be maintained.
- D. Attendance standards. An agency head may establish a standard of attendance.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-503. Outside Employment

- A. General.** A state employee may seek employment and engage in a variety of activities outside of the employee's work for the state; however, the employee shall not engage in other employment or other activity that is not compatible with the full and proper discharge of the duties and responsibilities of state employment, or that tends to impair the employee's capacity to perform the employee's duties and responsibilities in an acceptable manner.
- B. Definitions.** For the purposes of this Section:
1. "Other employment" includes, but is not limited to:
 - a. Working as an employee for any employer, including another state agency;
 - b. Owning a business;
 - c. Contracting to provide services for a fee; or
 - d. Serving as a consultant for a fee or being self-employed;
 - e. Holding any elected or appointed public office, whether federal, state, or local; or
 - f. Holding a position in a political party or organization.
 2. "Primary agency" means the agency in which the employee is employed at the time of the employee's request to obtain outside employment with another agency.
 3. "Secondary agency" means the agency in which the employee is requesting to be employed while remaining employed with the primary agency.
- C. Notice requirement.** An employee who desires to engage in other employment shall notify the employee's supervisor and abide by the policies of the employing agency. An employee engaged in outside employment, including consultant relationships, shall inform the supervisor of the nature of the employment and corresponding work hours. An employee shall also disclose actual or potential conflicts of interest related to outside employment activities as soon as the employee becomes aware of the conflict. The determination as to whether a conflict or potential conflict exists shall be made by the agency head.
- D. Outside employment with another state agency.** An employee who seeks outside employment with another state agency must request approval from both the employee's primary agency and prospective secondary agency before commencing employment with the secondary agency. The primary and secondary agencies must ensure that the request complies with state and federal guidelines. Such request, if approved shall be in writing and on file with both agencies. Employment records are to be maintained in accordance with the provisions of R2-5A-105.
- E. Outside employment as a paid public official or in a political party or organization.** All employees shall comply with A.R.S. § 41-752 pertaining to political activities.
- F. Termination of outside employment.** If an agency head determines that an employee's outside employment interferes with the employee's performance or creates a conflict of interest, the employee will be required to terminate the outside employment.
- G. Consequences of non-compliance.** An employee who fails to make required disclosures or to take action to resolve any conflict of interest may be disciplined or separated from state employment. Any such actions involving a covered employee shall be in accordance with the rules in Subchapter B, Article 3.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-504. Alcohol and Drug-free Workplace

State agencies shall prohibit the manufacture, distribution, dispensation, possession or use of alcohol, illegal drugs, unauthorized drugs, inhalants, or other unauthorized controlled substances during an employee's working hours or while on state premises or worksites, including state vehicles and property leased to the state. A state employee shall not be impaired by alcohol or drugs while on duty.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 6. LEAVE**PART A. GENERAL****R2-5A-A601. Leave Administration**

- A. Leave plans.** The Director shall adopt leave plans. Agency heads are responsible for administering leave for agency employees in accordance with the leave plans in this Article.
- B. Eligibility for leave.** All state employees, except temporary employees, are eligible for any type of leave with pay from the date of appointment. Temporary employees are eligible only for holidays subject to the provisions of R2-5A-B601, administrative leave, civic duty leave for the purpose of voting, living donor leave and military leave.
- C. Amount of leave.** Leave amounts are based on full-time employment and shall be pro-rated for part-time employees, even if not specified in an individual rule.
- D. Family and Medical Leave Act (FMLA) leave.** FMLA Regulations, 29 CFR 825.100 through 29 CFR 825.800 (July 2012), are incorporated by this reference and on file with the Department and available from the U.S. Government Printing Office, 732 N. Capitol Street N.W., Washington, D.C. 20401. This incorporation by reference contains no future editions or amendments. An employee who meets FMLA eligibility requirements and uses leave for any of the situations covered by the FMLA shall be subject to the following:
1. Counting FMLA leave. Periods of paid leave and periods of leave without pay shall count towards the employee's available FMLA leave.

2. Use of accrued paid leave. An employee shall use available paid leave for all or part of the employee's FMLA leave under the conditions in:
 - a. R2-5A-D602 for an employee on industrial leave,
 - b. R2-5A-D601 for an employee on FMLA leave for any other reason.
- E. Insurance benefits continuation. An employee remains eligible for continued participation in the employee insurance plans while on leave pursuant to this Article.
- F. Requests for leave. Except in an emergency, an employee shall obtain approval in advance and in writing before taking any leave.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

PART B. PAID LEAVE

R2-5A-B601. Holidays

- A. State holidays.
 1. January 1, "New Year's Day."
 2. Third Monday in January, "Martin Luther King, Jr./Civil Rights Day."
 3. Third Monday in February, "Lincoln/Washington Presidents' Day."
 4. Last Monday in May, "Memorial Day."
 5. July 4, "Independence Day."
 6. First Monday in September, "Labor Day."
 7. Second Monday in October, "Columbus Day."
 8. November 11, "Veterans Day."
 9. Fourth Thursday in November, "Thanksgiving Day."
 10. December 25, "Christmas Day."
- B. Employees scheduled to work. Unless required to work to maintain essential state services, an employee who is regularly scheduled to work on a day on which one of the holidays listed in subsection (A) is observed is entitled to be absent with pay for the number of hours regularly scheduled to work, not to exceed eight hours, provided the employee is not on leave without pay on the employee's work days immediately preceding or following the day on which the holiday is observed.
 1. Part-time employees who work 1/4 time, 1/2 time, or 3/4 time are entitled to a proportional amount of holiday pay. Part-time employees who work a percentage of full-time other than 1/4 time, 1/2 time, or 3/4 time are entitled to holiday pay at the next lower rate. An employee who works less than 1/4 time is not entitled to holiday pay.
 2. Temporary employees shall receive holiday pay provided they are in pay status the day before and the day after the holiday.
- C. Employees not scheduled to work. An employee, excluding part-time and temporary employees, who is not scheduled to work on a day on which one of the holidays listed in subsection (A) above is observed shall receive holiday compensation for the number of hours normally worked per day, not to exceed eight, provided the employee is not on leave without pay on the employee's work days immediately preceding or following the day on which the holiday is observed.
- D. Employees required to work. An employee who is required to work on a day on which a holiday listed in subsection (A) is observed shall receive:
 1. Both holiday compensation and one hour of pay at the employee's current salary rate for each hour worked if the employee is in a position that is either:
 - a. FLSA non-exempt; or
 - b. Exempt from the FLSA, but meets the conditions in R2-5A-404(D)(2).
 2. No additional compensation if the employee is in a position that is exempt from the FLSA and is employed in any other capacity.
- E. Holiday compensation.
 1. Except as modified by subsection (E)(2), an employee who is eligible for holiday compensation pursuant to subsection (C) or (D) shall receive for each hour of holiday compensation authorized, at the option of the agency head, either:
 - a. One hour of additional pay at the current salary rate; or
 - b. One hour of annual leave; or
 - c. One hour time off with pay on an alternate work day specified by the agency head after the holiday and during the pay period in which the holiday is observed, or the succeeding pay period.
 2. Temporary employees do not accrue annual leave and shall receive either additional pay or time off as in subsection (E)(1)(c) above.
 3. An employee may not receive more than eight hours of holiday compensation for any holiday.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B602. Annual Leave

- A. Definitions. For the purposes of this Section:
 1. "Annual leave" means a period of approved absence with pay that is not chargeable to another category of leave.
 2. "Hire date" means the employee's first day of work upon hire or, if the employee has a break in service, rehire.
- B. Accrual.
 1. All employees, except temporary and part-time employees shall accrue annual leave as follows:
 - a. Covered employees shall accrue annual leave in accordance with the following schedule:

Credited Service	Hours Bi-weekly
Fewer than 3 years	3.70
3 years but fewer than 7 years	4.62
7 years but fewer than 15 years	5.54
15 years or more	6.47

- b. Except as provided in subsection (B)(1)(c), uncovered employees shall accrue leave based on the following schedule:

Credited Service	Hours Bi-weekly
Fewer than 3 years	4.00
3 years but fewer than 9 years	5.54
9 years or more	6.47

- c. An uncovered employee shall accrue annual leave at the rate of 6.47 hours bi-weekly if:
- The employee's hire date is prior to September 29, 2012, the employee has remained employed without a break in service since that date, and the employee either was uncovered prior to September 29, 2012 or became uncovered in accordance with A.R.S. Title 41, Chapter 4, Article 4; or
 - The employee is in a position listed in A.R.S. § 41-742(F).

2. Temporary employees shall not accrue annual leave.

3. Part-time employees who:

- Work 1/4 time, 1/2 time, or 3/4 time shall accrue a proportional amount of annual leave;
- Work a percentage of full-time other than 1/4 time, 1/2 time, or 3/4 time shall accrue annual leave at the next lower rate;
- Work less than 1/4 time shall not accrue annual leave.

4. Except as provided by R2-5A-D602 for an employee on industrial leave, an eligible employee accrues annual leave each bi-weekly pay period if the employee is in pay status for at least one-half of the employee's scheduled work hours in that pay period.

5. An annual leave accrual is credited on the last day of the bi-weekly pay period in which the accrual is earned and is available for use on the first day of the following pay period.

- Annual leave accrued during the last pay period that begins in a calendar year is not subject to forfeiture under subsection (D).
- An employee who is separating from state employment is compensated in accordance with subsection (I) for annual leave accrued through the employee's last date of employment.

6. The effective date for change in the accrual rate is the first day of the pay period immediately following the attainment of the required credited service.

C. Credited service.

1. Credited service shall be calculated from the first day of the first complete pay period worked.

2. Credited service shall include:

- A period of service as an employee of a state budget unit before a break in service of less than two years;
- A period of leave without pay of 240 hours or less;
- Family and Medical Leave Act (FMLA) leave;
- Military leave taken under A.R.S. §§ 26-168, 26-171, or 38-610; and
- Active military service of an employee who is restored to state employment under A.R.S. § 38-298.

D. Accumulation.

1. Except as provided in subsections (D)(2) and (3), an employee shall forfeit annual leave in excess of the accumulation limit as of the last day of the last pay period that begins in a calendar year. The accumulation limit is:

- 240 hours for a covered employee.
- 320 hours for an uncovered employee.

2. An agency head may request an exception to the accumulation limit contained in subsection (D)(1) for an employee in an individual case.

- An agency head seeking an exception shall submit a written request to the Director that contains a plan to use the excess hours during the following calendar year, pay the employee for the excess hours, or a combination of both.
- The Director may approve, modify, or deny the request.

3. Annual leave earned for working on a day on which a state holiday is observed is not included in the accumulation limit specified in subsection (D)(1) and shall not be forfeited.
- E. Use of annual leave.**
1. An employee may take annual leave at any time approved by the agency head.
 2. An agency head shall not advance annual leave to an employee.
- F. Donation of annual leave.**
1. Definitions. For the purposes of this subsection:
 - a. *“Immediate family” means the recipient employee’s parent, spouse, or child, whether natural, adopted, foster, or step.* A.R.S. § 41-748(B)(1)
 - b. *“Family” means spouse, natural child, adopted child, foster child, stepchild, natural parent, stepparent, adoptive parent, grandparent, grandchild, brother, sister, sister-in-law, brother-in-law, son-in-law, daughter-in-law, mother-in-law, father-in-law, aunt, uncle, nephew, or niece.* A.R.S. § 41-748(B)(2)
 - c. *“Disability that is caused by pregnancy or childbirth” means, as certified by a licensed health care practitioner:*
 - i. An employee is unable to work due to the employee’s pregnancy, childbirth, or medical care associated with the pregnancy or childbirth; or
 - ii. A member of the employee’s immediate family requires assistance to perform regular daily activities due to the immediate family member’s pregnancy, childbirth, or medical care associated with the pregnancy or childbirth.
 - d. *“Extended” means a period of at least three consecutive weeks.*
 - e. *“Seriously incapacitating” means a licensed health care practitioner certifies that an illness, injury, or disability that is caused by pregnancy or childbirth:*
 - i. Involves in-patient care, or
 - ii. Involves continuing treatment.
 2. Eligibility to receive donation of annual leave. An employee who has exhausted all available leave balances is eligible to receive donations of annual leave if, as certified by a licensed health care practitioner:
 - a. The employee is unable to work due to:
 - i. A seriously incapacitating and extended illness or injury, or
 - ii. A seriously incapacitating and extended disability that is caused by pregnancy or childbirth, or
 - b. The employee needs to care for a member of the employee’s immediate family who has:
 - i. A seriously incapacitating and extended illness or injury, or
 - ii. A seriously incapacitating and extended disability that is caused by pregnancy or childbirth.
 3. Eligibility to donate annual leave. An employee may donate annual leave to another employee who has exhausted all available leave balances if:
 - a. The recipient employee is employed in the same state agency as the donating employee, or
 - b. The recipient employee is a family member of the donating employee and employed in another state agency.
 4. Exhaustion of available leave. Before using donated annual leave, a recipient employee:
 - a. Who has a qualifying illness, injury, or disability caused by pregnancy or childbirth shall exhaust all available sick leave, compensatory leave, annual leave earned for working on a day on which a state holiday is observed and accrued annual leave; or
 - b. Whose immediate family member has a qualifying illness, injury, or disability caused by pregnancy or childbirth shall exhaust sick leave granted in accordance with R2-5A-B603(A)(4), if available, and all available compensatory leave, annual leave earned for working on a day on which a state holiday is observed and accrued annual leave.
 5. Calculation of hours donated. An agency head shall adjust the number of hours of annual leave donated in proportion to the hourly rate of pay of the donating employee and the recipient employee. To calculate the number of hours of donated annual leave:
 - a. Multiply the actual number of hours donated by the donating employee’s hourly rate of pay, and
 - b. Divide the result by the recipient employee’s hourly rate of pay.
 6. Maximum duration. A recipient employee is limited to using donated annual leave to allow the employee to be absent from work for a maximum of six consecutive months, or if the leave is intermittent, 1040 hours (the employee’s available leave plus leave donated to the employee) for each qualifying occurrence. If the recipient employee has a seriously incapacitating and extended illness or injury, or a seriously incapacitating and extended disability that is caused by pregnancy or childbirth and the employee applies for Long-term Disability (LTD) by the end of the fifth month of the employee’s leave, the recipient employee may continue to use donated annual leave for up to 60 additional days or until LTD benefit payments begin, whichever is sooner.
 7. Unused donated leave. If the recipient employee separates from state employment, recovers before using all donated leave, attains the maximum donation of annual leave as permitted under subsection (F)(6), or the need for the donated annual leave is otherwise abated, the agency head shall return unused donated leave to employees who donated leave on a pro-rata basis.
- G. Payment of annual leave. Subject to funding availability:**
1. An agency head may pay an employee at any time at the employee’s current rate of pay for all or any portion of the employee’s annual leave that was earned as the result of working on a day on which a state holiday is observed.
 2. An agency head may approve pay to a non-separating employee for all or any portion of the employee’s accumulated and unused annual leave at the employee’s current rate of pay subject to the following:
 - a. Agency procedures. Before an employee under this subsection, an agency head shall develop written standards and procedures that provide for equal consideration of all employees similarly situated. The agency head shall submit proposed

standards and procedures and any subsequent changes to the Director for approval. The agency's procedures shall include at minimum:

- i. Request and approval procedures;
- ii. Documentation required to support the request for payment;
- iii. Any limitations, as applicable, including, but not limited to: the maximum number of times an employee may receive payment under this subsection; the maximum number of hours an employee may be paid per occurrence; the minimum number of hours of annual leave an employee must have used in the previous 12 months; and the minimum balance an employee is required to maintain after payout, if any.
- b. Restrictions. The agency head shall obtain the employee's concurrence if the payment would reduce the employee's annual leave balance to fewer than:
 - i. 240 hours for a covered employee;
 - ii. 320 hours for an uncovered employee.

H. Movement.

1. To another state agency. If an employee moves from one agency to another state agency, the employee's accumulated and unused annual leave shall be transferred to the employee's annual leave account in the new state agency, unless:
 - a. The provisions of subsection (H)(2) apply; or
 - b. The employee's leave exceeds the accumulation limit contained in subsection (D)(1). An agency head may pay an employee who transfers to another state agency for all excess annual leave at the time of the transfer. An agency head may transfer part or all of the employee's excess annual leave accumulated by the employee who transfers to another agency with the gaining agency's concurrence. If the gaining agency does not concur, the losing agency shall pay all of the unused excess annual leave that the gaining agency will not accept.
2. To an employment status ineligible for leave accrual. If an employee becomes ineligible for accrual of annual leave under R2-5A-A601(B), the agency head or the agency head of the losing agency if the employee moves to another state agency, shall pay the employee for all unused and unforfeited annual leave at the employee's current rate of pay immediately before the change in status.

- I. Separation. An agency head shall pay an employee who separates from state employment for all unused and unforfeited annual leave at the employee's current rate of pay. **Historical Note**

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

R2-5A-B603. Sick Leave

A. Definition. "Sick leave" is any approved period of paid absence granted an employee due to:

1. Illness or injury that renders the employee unable to perform the duties of the employee's position.
2. Disability of the employee that is caused by pregnancy, childbirth, miscarriage, or abortion.
3. Examination or treatment of the employee by a licensed health care practitioner.
4. Illness, injury, disability caused by pregnancy or childbirth, or examination or treatment by a licensed health care practitioner of an employee's spouse, dependent child, or parent. Sick leave granted for this purpose shall be charged to the employee's sick leave account and shall not exceed 40 hours per calendar year. For the purposes of this Section:
 - a. The term "dependent child" means a natural child, an adopted child, a foster child, or a stepchild, more than one-half of whose support is received from the employee.
 - b. The term "parent" means a birth parent, adoptive parent, stepparent, foster parent, grandparent, parent-in-law, or an individual who stood "in loco parentis."

B. Accrual.

1. All state employees, except temporary and part-time employees, shall accrue sick leave at the rate of 3.70 hours bi-weekly.
2. Temporary employees shall not accrue sick leave.
3. Part-time employees who:
 - a. Work 1/4 time, 1/2 time, or 3/4 time shall accrue a proportional amount of sick leave;
 - b. Work a percentage of full-time other than 1/4 time, 1/2 time, or 3/4 time will accrue sick leave at the next lower rate;
 - c. Work less than 1/4 time shall not accrue sick leave.
4. Except as provided by R2-5A-D602 for an employee on industrial leave, an eligible employee accrues sick leave each bi-weekly pay period if the employee has been in a pay status for at least one-half of the employee's scheduled work hours in that pay period or month.
5. A sick leave accrual is credited on the last day of the bi-weekly pay period or month in which the accrual is earned and is available for use on the first day of the following pay period or month. An employee who is separating from state employment accrues leave through the employee's last date of employment for the purpose of determining the employee's accumulated sick leave at the time of the employee's separation pursuant to subsection (F).

C. Accumulation. Sick leave accumulates without limit.

D. Use of sick leave.

1. Sick leave may be taken when approved by the agency head.
2. The agency head may require submission of evidence substantiating the need for sick leave. If the agency head determines the evidence is inadequate, the absence shall be charged to another category of leave or considered absence without leave.
3. An agency head may require an employee to be examined by a licensed health care practitioner designated by the agency head.

- a. If the licensed health care practitioner determines that the employee should not work due to illness or injury, the agency head may place the employee on sick leave or, if the employee's sick leave is exhausted, charge the absence to another category of leave or leave without pay.
 - b. The agency head may require the employee to obtain approval from the licensed health care practitioner before returning to work.
 - c. The agency shall pay for all examinations required pursuant to this subsection. The employee shall not be charged any leave while participating in or traveling to or from any examination required pursuant to this subsection.
- E.** Movement to another state agency. An employee who moves to another state agency shall transfer all accumulated and unused sick leave to the employee's sick leave account in the new state agency.
- F.** Separation. All sick leave credits are forfeited upon separation from state employment except as provided in A.R.S. § 38-615 or otherwise provided by law. However, an employee who returns to state employment within two years after separation shall be credited with all unused sick leave accumulated at the time of separation if the employee was not paid for accumulated sick leave pursuant to A.R.S. § 38-615.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B604. Administrative Leave

- A.** General. An agency head may authorize an employee to be absent with pay on administrative leave during a state of emergency declared by the Governor or:
- 1. In other emergency situations such as extreme weather conditions, fire, flood, or malfunction of publicly-owned or controlled machinery or equipment.
 - 2. To relieve an employee of duties temporarily during the investigation of alleged wrongdoing by the employee or during a disciplinary process, subject to the requirements outlined in subsections (B) and (C).
- B.** Reporting administrative leave. If an employee's administrative leave totals 80 consecutive hours, the agency head shall submit a report to the Director and for each week thereafter, until the employee's administrative leave is terminated. The report shall include:
- 1. The name of the agency,
 - 2. The employee identification number (EIN) of the employee,
 - 3. The name of the employee,
 - 4. The employment status of the employee,
 - 5. The date the employee was placed on administrative leave,
 - 6. The number of hours the employee has been on administrative leave as of the date of the report, and
 - 7. A brief description as to why the employee is on administrative leave.
- C.** Approval of Director. If an employee's administrative leave is anticipated to exceed 240 consecutive working hours, the agency head shall obtain the approval of the Director.
- 1. An agency head requesting approval to continue an employee's administrative leave for more than 240 working hours shall submit a request to the Director for approval at least five business days before the employee's administrative leave will total 240 working hours. If circumstances beyond the agency's control do not permit at least five business days' notice, the agency head shall submit the request as soon as the agency head is aware of the necessity for the request. The request shall include all of the information listed in subsection (B), the reason the administrative leave will extend beyond 240 working hours and the anticipated date the administrative leave will be terminated.
 - 2. The Director shall review the request and approve, modify or deny the request within three business days of receipt.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

R2-5A-B605. Bereavement Leave

- A.** General. An employee may be absent with pay due to the death or funeral of a spouse, natural child, adopted child, foster child, stepchild, natural parent, stepparent, adoptive parent, an individual who stood "in loco parentis," grandparent, grandchild, brother, sister, brother-in-law, sister-in-law, mother-in-law, father-in-law, son-in-law, or daughter-in-law.
- B.** Amount of bereavement leave.
- 1. A full-time employee may be absent with pay for up to 24 regularly scheduled work hours. An agency head may extend the bereavement leave for up to 16 additional work hours if the employee travels out-of-state for the funeral.
 - 2. A part-time employee who works 1/4 time, 1/2 time, or 3/4 time may be absent with pay for a proportional amount of bereavement leave. A part-time employee who works a percentage of full-time other than 1/4 time, 1/2 time, or 3/4 time may be absent with pay at the next lower rate. An employee who works less than 1/4 time is not entitled to bereavement leave.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B606. Civic Duty Leave

- A.** General. Upon substantiated application, an employee shall receive absence with pay as civic duty leave while serving as a juror, complying with a subpoena, voting, or serving as a member of a governmental board, commission, or similarly constituted governmental body, subject to the conditions set forth in this rule and the limitations in R2-5A-A601(B).

- B. Use of civic duty leave. Except for voting pursuant to A.R.S. § 16-401 (primary elections) or A.R.S. § 16-402 (general elections), an employee granted civic duty leave shall report for duty with the employing agency whenever the employee's presence is not required for the civic duty, unless:
 1. The distance to the work location would preclude timely reporting for the civic duty, or
 2. The employee cannot return to work at least one hour before the end of the work shift.
- C. Appearance as a witness. An employee who is subpoenaed as a witness by any court or administrative, executive, or judicial body in this state may be absent with pay unless the testimony or evidence to be given relates to the employee's commercial, business, or personal matters.
- D. Jury and witness fees. Employees who are granted civic duty leave when called for jury duty or subpoenaed as a witness shall remit any fees to the employing agency, except for mileage allowance.
- E. Membership on a public service body. An employee serving as a member of a governmental board, commission, or similarly constituted governmental body may be absent with pay while performing official duties with the body.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B607. Compensatory Leave

- A. General. Compensatory leave is leave that has been earned by an employee under the provisions of R2-5A-404.
- B. Use of compensatory leave. An agency head:
 1. Shall approve an employee's request for earned compensatory time off within a reasonable time after the employee makes the request if the use of such time off would not unduly disrupt agency operations.
 2. May require an employee to use the employee's available compensatory leave during a period specified by the agency head.
- C. Payment. Subject to funding availability, an agency head may pay an employee at any time for all or any portion of the employee's earned compensatory leave balance at the employee's regular rate of pay.
- D. Movement.
 1. To another state agency. An agency head may pay an employee who transfers to another state agency for all unused compensatory leave at the time of the transfer. An agency head may transfer part or all of the compensatory leave earned by an employee who transfers to another agency with the gaining agency's concurrence. If the gaining agency does not concur, the losing agency shall pay all of the unused compensatory leave that the gaining agency will not accept.
 2. To an employment status or a position ineligible for compensatory leave. If an employee has a change in employment status or position that results in the employee being ineligible to earn compensatory leave, the agency head or the agency head of the losing agency if the employee moves to another state agency, shall pay the employee for all unused compensatory leave at the employee's regular rate of pay immediately before the employee's change in status or position.
- E. Separation. An agency head shall pay an employee who separates from state employment for all unused compensatory leave at a rate of compensation not less than the higher of:
 1. The average regular rate received by such employee during the last three years of the employee's employment, or
 2. The final regular rate received by such employee.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B608. Educational Leave

- A. General. An employee may be sent with pay to participate in a formal educational or training course of study at a college, university, or technical school with the approval of the agency head and the Director, based on the determination that the leave is in the best interest of the state.
- B. Application. The approved application shall be accompanied by a written agreement signed by the agency head and the employee containing the following provisions at a minimum:
 1. A statement of the payments, if any, to be provided to the employee and the manner of their payment.
 2. An agreement by the employee to return to or continue in state employment upon the completion of the educational or training course of study for a period of time specified by the agency head.
 3. A statement by the employee that failure to successfully complete the course, to complete the specified state employment, or to fulfill all of the terms of the agreement, shall result in the employee's being required to repay all or a proportionate part of the salary and other payments received, if any.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B609. Living Donor Leave

An employee who requests absence with pay for living donor leave under A.R.S. § 41-706 shall submit written verification that the employee is to serve as a donor. An employee may be absent with pay for the time specified for the following purposes:

1. Up to 40 working hours to serve as a bone marrow donor.
2. Up to 240 working hours to serve as an organ donor.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B610. Leave for National Disaster Medical System (NDMS) Training

An employee who requests absence with pay on national disaster medical system leave under A.R.S. § 38-610 is entitled to be absent with pay for the number of hours regularly scheduled to work on all days the employee is on training duty.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-B611. Meritorious Service Leave

- A. The Director shall establish guidelines for meritorious service leave.
- B. Except for employees in covered positions classified as Correctional Officers I, II, or III, or Community Corrections Officers, meritorious service leave is only available to uncovered employees.
- C. The guidelines established by the Director shall include at a minimum:
 1. The maximum number of hours of meritorious service leave that may be awarded to an employee per calendar year;
 2. The maximum percentage of agency employees eligible for meritorious service leave;
 3. A requirement that an employee shall use meritorious service leave within 12 months of receipt of the leave;
 4. A requirement that if the employee does not use the meritorious service leave within 12 months of receipt, that the leave is forfeited; and
 5. A statement that unused meritorious service leave is forfeited upon separation from state employment.
- D. Subject to the guidelines established by the Director, a meritorious service leave program may be implemented at the discretion of the agency head.
- E. An agency head shall report to the Director on the utilization of meritorious service leave pursuant to the reporting requirements in the guidelines established by the Director.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

PART C. UNPAID LEAVE

R2-5A-C601. Furlough

- A. Definition. A furlough is the involuntary placement of an employee on leave of absence without pay for budgetary reasons.
- B. Types of furloughs. A furlough may be authorized by legislative action. In addition, the Director may approve:
 1. A reduction of funding furlough that allows an agency head to place employees on furlough for any combination of consecutive or non-consecutive days. There is no maximum number of days an employee may be placed on furlough, but consecutive furlough days shall not exceed five consecutive days or more than one-half the employee's regularly scheduled hours in a pay period, whichever is less; and
 2. A suspension of funding furlough that allows an agency head to place employees on furlough indefinitely until funding is restored.
- C. General.
 1. The total number of days an employee is placed on furlough may vary based on the amount of the reduction or length of suspension of funding.
 2. A furlough day equals eight hours for full-time employees and is pro-rated for part-time employees. Furlough hours for part-time employees are calculated by multiplying the number of hours the employee is scheduled to work in a week by 0.2. If the calculation results in a fraction, the furlough hours shall be rounded to the nearest whole hour, as follows:
 - a. 0.5 or above is rounded up, and
 - b. Less than 0.5 is rounded down.
 3. A furlough is unpaid.
 4. Unless a work emergency occurs under subsection (D)(5)(d), while on furlough, an employee shall not conduct state work or volunteer to conduct state work, either with or without compensation.
 5. Paid leave shall not be substituted for furlough days.
 6. All state employees within the scope of the furlough shall be subject to the furlough in the same manner. Exceptions may be granted when an agency head determines certain employees within the scope of the furlough have unique knowledge or skills or are considered mission critical and need to be excluded from the furlough.
 7. Unless the employee is in a physician or attorney position, an employee who is in a position that has been determined to be exempt from the provisions of the Fair Labor Standards Act (FLSA) will lose the exemption for any work week in which the employee is furloughed for less than the full work week.
 8. A furlough shall not adversely affect an employee's service anniversary date or create a break in service.
 9. Upon conclusion of the furlough period, an agency head shall return an employee to the employee's status and position held prior to the furlough, unless a personnel action taken in accordance with State Personnel System rules authorizes a change to the employee's record.
 10. An employee's failure or inability to return to work upon conclusion of the furlough period may, in accordance with applicable State Personnel System rules:
 - a. Result in the employee being placed on leave,
 - b. Be considered a resignation,
 - c. Result in separation without prejudice, or
 - d. Be cause for dismissal of a covered employee.
- D. Reduction of funding furlough.

1. An agency head shall submit to the Director a furlough plan for approval if the agency head determines a furlough is necessary due to a reduction of funding. An agency head is not required to implement or exhaust other cost-savings measures prior to initiating a furlough plan.
 2. The agency head shall submit the furlough plan for approval at least 30 business days prior to the proposed implementation date of the furlough. If circumstances beyond the agency head's control do not permit at least 30 business days' notice, the agency head shall submit the furlough plan as soon as the agency head is aware of the necessity for the furlough and provide a written explanation of why the 30 business day requirement was not met.
 3. An agency head shall include all of the following in the furlough plan:
 - a. The proposed scope of the furlough plan, which shall be either agency-wide or limited to:
 - i. Agency operations in one or more geographic areas,
 - ii. One or more organizational units of the agency,
 - iii. One or more funding sources,
 - iv. One or more job classes,
 - v. One or more class series, or
 - vi. Any combination of the above.
 - b. If the furlough will not be conducted on an agency-wide basis, each affected:
 - i. Geographic location,
 - ii. Organizational unit,
 - iii. Funding source,
 - iv. Job class, and
 - v. Class series.
 - c. For each affected geographical location, organizational unit, funding source, job class, and class series specified in the furlough plan, the total number of employees scheduled for furlough;
 - d. If requesting any exceptions within the scope of the furlough under subsection (C)(6), the total number of employees within the scope of the furlough, the number of employees for whom an exception is requested, and the reason for the request;
 - e. The number of days and date ranges for the furlough;
 - f. The anticipated cost savings due to the furlough;
 - g. The agency's procedures for scheduling furloughs; and
 - h. The procedures for notifying employees of the furlough.
 4. The Director shall review and provide written notification of approval, modification, or denial of an agency's furlough plan within 20 business days of receipt.
 5. Upon approval of the Director to conduct a reduction of funding furlough, an agency head:
 - a. May place an employee on furlough for any combination of consecutive or non-consecutive days, subject to the limits in subsection (B)(1);
 - b. Shall determine the scheduling of furloughs that provide for the continuation of any agency operations required by law;
 - c. May cancel or rescind any approved paid or unpaid leave in progress or scheduled for an employee who is designated for furlough and shall notify the affected employee in writing of the cancellation of the approved leave for the duration of the furlough. If the previously approved leave was scheduled to extend beyond the furlough, the employee may return to paid leave status, if available, following the furlough period. If the agency head cancels an employee's paid leave and:
 - i. The employee is on leave pursuant to the provisions of the federal Family and Medical Leave Act (FMLA) during a scheduled furlough day, the furlough day shall not count against the employee's FMLA entitlement and the employee's leave balance shall not be charged for the furlough day; or
 - ii. The employee is on military leave during a scheduled furlough day, the furlough day shall not count against the employee's military leave and the employee's leave balance shall not be charged for the furlough day; and
 - d. Shall prohibit an employee from working during the period of the furlough, unless a work emergency arises. In the event of a work emergency, an agency head may revoke the furlough for an employee in an individual case. An employee whose furlough is revoked due to an emergency shall be paid for time required to work and shall be required to take the furlough on another day, unless otherwise exempted.
- E. Suspension of funding furlough - agency head request.**
1. An agency head shall submit to the Director for approval a furlough plan if the agency head determines a furlough is required due to a suspension of funding to pay employees.
 2. The agency head shall submit the furlough plan for approval at least 15 business days prior to the proposed implementation date of the furlough. If circumstances beyond the agency head's control do not permit at least 15 business days' notice, the agency head shall submit the furlough plan as soon as the agency head is aware of the necessity for the furlough and provide a written explanation of why the 15 business day requirement was not met.
 3. An agency head shall include all of the following in the furlough plan:
 - a. The proposed scope of the furlough plan, which shall be either agency-wide or limited to:
 - i. Agency operations in one or more geographic areas,
 - ii. One or more organizational units of the agency,
 - iii. One or more funding sources,
 - iv. One or more job classes,
 - v. One or more class series, or
 - vi. Any combination of the above.

- b. If the furlough will not be conducted on an agency-wide basis, each affected:
 - i. Geographic location,
 - ii. Organizational unit,
 - iii. Funding source,
 - iv. Job class, and
 - v. Class series.
 - c. For each affected geographical location, organizational unit, funding source, job class, and class series specified in the furlough plan, the total number of employees scheduled for furlough;
 - d. If requesting any exceptions within the scope of the furlough under subsection (C)(6), the total number of employees within the scope of the furlough, the number of employees for whom an exception is requested, and the reason for the request;
 - e. The procedures for notifying employees of the furlough; and
 - f. The procedures for notifying employees of restoration of funding and when to return to work.
4. The Director shall review and provide written notification of approval, modification, or denial of an agency's furlough plan within 10 business days of receipt.
5. Upon approval of the Director to conduct a suspension of funding furlough, an agency head:
- a. Shall freeze all personnel actions except for those actions that would accomplish, or assist in accomplishing the purpose of the furlough;
 - b. May place employees on furlough indefinitely until the reason for the furlough is abated;
 - c. Shall notify affected employees of the furlough and that while on furlough, an employee:
 - i. Shall not report to work or work from any location until notified to return to work; and
 - ii. Will not receive pay for any unused and unforfeited annual leave, should the employee resign or be terminated, until funding is restored;
 - d. May cancel or rescind any approved paid or unpaid leave in progress or scheduled for an employee who is designated for furlough and shall notify the affected employee in writing of the cancellation of the approved leave for the duration of the furlough. If the previously approved leave was scheduled to extend beyond the furlough, the employee may return to paid leave status, if available, following the furlough period; and
 - e. Shall notify employees upon restoration of funding and when to return to work.
- F. Suspension of funding furlough - failure to pass state budget.**
- If the state fails to pass a budget and funds are not appropriated for the following fiscal year, the Director may authorize an agency head to implement a suspension of funding furlough. Upon such notification by the Director, an agency head:
- 1. Shall freeze all personnel actions except for those actions that would accomplish, or assist in accomplishing the purpose of the furlough;
 - 2. Unless an exception has been authorized as provided in subsection (F)(4), shall place all employees on furlough indefinitely until the reason for the furlough is abated;
 - 3. Shall require all employees to be subject to the furlough in the same manner;
 - 4. May establish exceptions when only a portion of the employees in a particular class are necessary to perform mission critical services;
 - 5. Shall notify affected employees of the furlough and that while on furlough, an employee:
 - a. Shall not report to work or work from any location until notified to return to work; and
 - b. Will not receive pay for any unused and unforfeited annual leave, should the employee resign or be terminated, until funding is restored;
 - 6. Shall cancel or rescind any approved paid or unpaid leave in progress or scheduled for an employee who is designated for furlough and shall notify the affected employee in writing of the cancellation of the approved leave for the duration of the furlough. If the previously approved leave was scheduled to extend beyond the furlough, the employee may return to paid leave status, if available, following the furlough period; and
 - 7. Shall notify employees upon restoration of funding and when to return to work.
- G. Employee request for review.**
- 1. An employee may submit a request for review of the employee's placement on furlough. The employee shall make the request for review in writing to the agency head no later than three business days after the employee's receipt of a furlough notice. The employee shall limit the request for review to the determination resulting in the employee's furlough and include a proposed resolution.
 - 2. The agency head shall provide a written response to the employee with a final decision within:
 - a. Five business days after receipt of the request if a reduction of funding furlough, or
 - b. Fifteen business days after the employee returns to work if a suspension of funding furlough.
 - 3. A request for review shall not delay implementation of the furlough. **Historical Note**
Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).
- A. Approval.** All leave without pay requires a written request by an employee in advance, including the reason for the employee's request, and approval by the agency head.
- B. Use of leave.** Except for military leave, an agency head shall not grant leave without pay in excess of 80 consecutive hours until all annual leave earned for working on a day on which a state holiday is observed, all accrued annual leave and, if the leave without pay is for medical reasons, sick leave are exhausted.
- C. Return to work.**

1. An employee who returns to work after an authorized period of leave without pay of 80 consecutive hours or less shall return to the same position occupied at the start of the leave without pay.
 2. Except as provided in subsection (C)(4), an employee who returns to work after a period of leave without pay in excess of 80 consecutive hours may return to a position in the class held at the start of the leave without pay, if a position is available and funded, and if the leave without pay is terminated in one of the following ways:
 - a. Expiration of its term and the employee's return to work;
 - b. Rescission of the leave without pay by the agency head before its scheduled expiration due to an unforeseen need that results in an insufficient number of employees available to provide service and for which:
 - i. The agency head provides written notice of the rescission to the employee's last known address at least 15 days before the date the employee is directed to return to work; or
 - ii. If circumstances beyond the agency's control do not permit at least a 15-day notice, the agency head provides notice as soon as possible after becoming aware of the need for the employee to return to work; or
 - c. Curtailment of the leave without pay before its scheduled expiration date upon request of the employee and with approval of the agency head.
 3. An agency head may consider the failure or inability of an employee to return to work on the first work day after an approved leave without pay as a resignation.
 4. An employee returning to work from leave without pay granted:
 - a. For industrial illness or injury for up to six months shall return to the position occupied at the start of the leave without pay. If this position or a position in the same class is not available and funded, the agency head shall conduct a layoff or, if the employee is covered, a reduction in force in accordance with Subchapter B.
 - b. As military leave is subject to the provisions of the USERRA regulations incorporated by reference in R2-5A-D603.
 - c. As FMLA leave is subject to the provisions of the FMLA regulations incorporated by reference in R2-5A-D601.
- D. Insurance benefits continuation.** An employee who is on leave without pay may continue to participate in the employee insurance plans as follows:
1. Health benefit plan participation.
 - a. An employee who is on FMLA leave is eligible to continue to participate in the health benefit plan for the duration of the FMLA leave by paying the employee premium/contribution. An agency head may recover the state's portion of premium/contributions paid to maintain health coverage for an employee if the employee fails to return from FMLA leave under certain circumstances, in accordance with FMLA regulations incorporated by reference in R2-5A-D601.
 - b. An employee who is on leave without pay for a health-related reason that is not an industrial illness or injury and who either does not meet FMLA eligibility requirements or has exhausted FMLA leave and remains absent from work may continue to participate in the health benefit plan by paying both the state and employee premium/contribution. Authority to continue participation in the health benefit plan shall terminate on the earliest of:
 - i. Receipt of long-term disability benefits for which there is eligibility to continue health benefit plan participation under a state-sponsored retirement plan,
 - ii. A determination of eligibility for Medicare coverage, or
 - iii. 30 months after the incapacity began.
 - c. An employee who is on leave without pay for reasons other than those outlined in subsection (D)(1)(a), (b), or R2-5A-D602 pertaining to industrial leave, may continue to participate in the health benefit plan for a maximum of six months by paying both the state and employee premiums/contributions.
 2. Life insurance plan participation.
 - a. An employee who is on FMLA leave continues to participate in the Basic Life and Accidental Death and Dismemberment Insurance Plan and may continue to participate in the supplemental life and dependent life insurance coverage by paying the full premium/contribution.
 - b. An employee who is on leave without pay for a health-related reason that is not an industrial illness or injury and who either does not meet FMLA eligibility requirements or has exhausted FMLA leave and remains absent from work may continue to participate in the basic life insurance plan by paying the state premium/contribution. An employee who elects to continue to participate in the basic plan may also continue any supplemental or dependent life coverage that is in force at the beginning of the leave without pay by continuing to pay the premium/contribution. Authority to continue in the life insurance plan shall terminate in accordance with the time limits specified in subsection (D)(1)(b).
 - c. An employee who is on leave without pay for reasons other than those outlined in subsection (D)(1)(a), (b), or R2-5A-D602 pertaining to industrial leave, may continue to participate in the basic life insurance plan by paying the state premium/contribution. An employee who elects to continue to participate in the basic plan may also continue any supplemental or dependent life coverage that is in force at the beginning of the leave without pay by continuing to pay the premium/contribution. Authority to continue in the life insurance plan shall be available for a maximum of six months.
 3. Termination of insurance. The insurance coverage of an individual on leave without pay who fails to pay insurance premiums/contributions when due shall terminate at 11:59 p.m. on the last day of the period covered by the last premium/contribution paid.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

PART D. LEAVE THAT COULD BE EITHER PAID OR UNPAID

- A.** General. All state agencies are responsible for complying with the federal Family and Medical Leave Act (FMLA) of 1993 and all applicable revisions. FMLA Regulations, 29 CFR 825.100 through 29 CFR 825.800 (July 2012), are incorporated by this reference and on file with the Department and available from the U.S. Government Printing Office, 732 North Capitol Street N.W., Washington, D.C. 20401. This incorporation by reference contains no future editions or amendments. Any interference with, restraint of, or denial of an employee's rights provided by the FMLA is strictly prohibited.
- B.** Eligible employee.
1. An eligible employee for the purposes of the FMLA is an employee who:
 - a. Is an employee of the state of Arizona;
 - b. Has been employed by the state of Arizona for at least 12 months; and
 - c. Worked for at least 1,250 hours of service during the 12 months immediately preceding commencement of the leave.
 2. An agency head shall not extend FMLA benefits to an ineligible employee.
- C.** Situations covered by the FMLA. A state agency shall grant an eligible employee FMLA leave when the employee takes leave for one or more of the following reasons:
1. The birth of a child or placement of a child with the employee for adoption or foster care, provided the leave concludes within 12 months of the birth or placement.
 2. To care for the employee's spouse, child or parent with a serious health condition.
 3. The employee is unable to work because of the employee's own serious health condition.
 4. Any qualifying exigency arising out of the fact that the employee's spouse, child or parent is a covered military member on active duty or call to active duty status in support of a contingency operation.
 5. To care for a covered service member with a serious injury or illness when the covered service member is the employee's spouse, child, parent or next of kin.
- D.** Amount of FMLA leave.
1. An employee who takes FMLA leave for any of the situations described in subsections (C)(1), (2), (3) or (4) may take a maximum of 12 workweeks of leave during any rolling 12-month period, measured backward from the first day of each approved period of FMLA leave.
 2. An employee who takes FMLA leave for the situation described in subsection (C)(5) may take up to 26 workweeks of leave in a single 12-month period.
 3. During a 12-month period, an eligible employee is able to take no more than 12 workweeks of leave for any of the situations described in subsections (C)(1), (2), (3) or (4) and a combined total of 26 workweeks of leave if the leave includes the situation described in subsection (C)(5).
 4. If a husband and wife are both state employees, the husband and wife are limited in the amount of FMLA leave taken to a combined total of:
 - a. 12 workweeks of leave for the birth and care of a newborn child, placement of a child for adoption or foster care, or to care for a parent who has a serious health condition.
 - b. 26 workweeks of leave to care for a covered service member with a serious injury or illness.
- E.** Designation of FMLA leave. An employee need not specifically request FMLA leave to be placed on FMLA leave. If an eligible employee takes leave for any reason covered by the FMLA and has not already exhausted the employee's available FMLA leave, the agency head shall designate the employee's leave as FMLA leave.
- F.** Use of paid leave. Except for portions of industrial leave, an employee on FMLA leave shall be required to use the employee's available paid leave while on FMLA leave as follows and in the following order:
1. Sick leave or, as applicable, family sick leave subject to the provisions of R2-5A-B603.
 2. Compensatory leave subject to the provisions of R2-5A-B607.
 3. Annual leave subject to the provisions of R2-5A-B602.
 4. Leave without pay subject to the provisions of R2-5A-C602.
- G.** Insurance benefits continuation. An employee who is using leave with pay remains eligible for continued participation in the employee insurance plans and the employee's share of premiums/contributions is paid through payroll deduction. An employee who is on leave without pay while on FMLA leave may continue to participate in the employee insurance plans as follows:
1. Health benefit plan participation. An employee is eligible to continue to participate in the health benefit plan for the duration of the FMLA leave by paying the employee premium/contribution. An agency head may recover the state's portion of premium/contributions paid to maintain health coverage for an employee if the employee fails to return from FMLA leave under certain circumstances, in accordance with FMLA regulations incorporated by reference in subsection (A).
 2. Life insurance plan participation. An employee continues to participate in the Basic Life and Accidental Death and Dismemberment Insurance Plan and may continue to participate in the supplemental life and dependent life insurance coverage by paying the full premium/contribution.
 3. Termination of insurance. The insurance coverage of an employee on leave without pay who fails to pay insurance premiums/contributions when due shall terminate at 11:59 p.m. on the last day of the period covered by the last premium/contribution paid.
- H.** Return from FMLA leave. An agency head shall restore an employee returning from FMLA leave to the employee's original job, or to an equivalent job with equivalent pay, benefits, and other terms and conditions of employment. The provisions of the FMLA, not the provisions of R2-5A-C602(C), shall govern return to work from leave without pay granted to complete an FMLA-qualified leave.

- I. Employee responsibilities. An employee is required to adhere to the employing agency's call-in procedures, give the agency 30 days' notice in the event of a foreseeable leave, provide requested documentation, and periodic updates of the employee's status and intent to return to work as requested by the agency.
- J. Agency rights. Nothing in the FMLA or this rule should be construed as limiting an agency's right to manage, discipline or terminate an employee, including an employee's failure to comply with the agency's request for appropriate documentation to substantiate the employee's need for the leave. However, an employee's use of FMLA leave cannot be considered as a negative factor in any employment decision.
- K. Conflict. If there is a conflict between the provisions of these rules and the FMLA, the provisions of the FMLA govern.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

- A. Use of leave.
 - 1. An agency head shall place an employee who sustains a job-related illness or injury that is compensable under the Workers' Compensation Law, A.R.S. Title 23, Chapter 6 on sick leave.
 - 2. If an employee who is on leave under the Worker's Compensation laws meets Family and Medical Leave Act (FMLA) eligibility requirements and the leave qualifies for FMLA leave, an agency head shall count it as FMLA leave. An agency head shall apply industrial leave and FMLA concurrently.
 - 3. An employee shall use leave in an amount necessary to receive total payments (leave payments plus Workers' Compensation payments) that do not exceed the gross salary of the employee.
 - 4. If an employee exhausts all sick leave, compensatory leave and annual leave, an agency head shall place the employee on leave without pay.
- B. Payments. If an employee receives a retroactive Workers' Compensation payment for any period of industrial illness or injury for which leave payments were received, the employee shall reimburse the agency for Workers' Compensation payments that exceed 100% of the employee's base pay before the illness or injury, and the agency head shall restore the equivalent value of leave to the employee's appropriate leave account.
- C. Light duty. If an employee has a job-related illness or injury that impairs performance on the former job, the agency head shall make every effort to place the employee in a suitable position within the agency, including a light duty assignment.
- D. Restriction. An agency head shall not grant sick leave or leave without pay to an employee who fails to accept compensation available under the industrial injury and disease provisions of A.R.S. §§ 23-901 to 23-1091.
- E. Insurance benefits continuation. An employee who is using leave with pay in accordance with subsection (A) remains eligible for continued participation in the employee insurance plans and the employee's share of premiums/contributions is paid through payroll deduction. An employee who is on leave without pay due to an industrial illness or injury may continue to participate in the employee insurance plans as follows:
 - 1. Health benefit plan participation.
 - a. An employee may continue to participate in the health benefit plan for a maximum of six months from the date of illness or injury by paying the employee premium/contribution.
 - b. At the end of the six-month period, an employee who remains on leave without pay due to industrial illness or injury may continue to participate in the health benefit plan by paying both the state and employee premiums/contributions, until the employee returns to work or is determined to be eligible for Medicare coverage or Long-term Disability, whichever occurs first.
 - 2. Life insurance plan participation. An employee who is on leave without pay continues to participate in the basic life and accidental death and dismemberment insurance plan without cost for six months after the month in which the illness or injury occurs. During this six-month period, the employee may continue supplemental life and dependent life coverages that were in effect at the start of the leave by paying the applicable premium/contribution.
 - 3. Termination of insurance. The insurance coverage of an employee on leave without pay who fails to pay insurance premiums/contributions when due shall terminate at 11:59 p.m. on the last day of the period covered by the last premium/contribution paid.
- F. Accrual of leave. An employee shall continue to receive full leave accrual as long as the employee uses two or more hours of paid leave each day.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-D603. Military Leave

An employee who requests absence with pay on military leave under A.R.S. § 26-168, 26-171, or 38-610 shall submit a copy of the orders for duty with the request for military leave. An employee may be absent with pay for military purposes for up to thirty days in any two consecutive federal fiscal years. All state agencies are responsible for complying with the federal Uniformed Services Employment and Reemployment Rights Act (USERRA) of 1994 and all applicable revisions. USERRA Regulations, 20 CFR 1002.1 through 20 CFR 1002.314 (April 2012), are incorporated by this reference and on file with the Department and available from the U.S. Government Printing Office, 732 North Capitol Street N.W., Washington, D.C. 20401. This incorporation by reference contains no future editions or amendments.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-D604. Victim Leave

An employee who is a victim of a juvenile offense or a crime and who requests absence from work to attend court-related proceedings under A.R.S. § 8-420 or 13-4439 shall submit a copy of the form provided to the employee by the law enforcement agency or a copy of the information the law enforcement agency provided to the employee with the request for victim leave. An employee shall use the employee's available sick leave, compensatory leave or annual leave for such absence. If an employee exhausts all sick leave, compensatory leave and annual leave, an agency head shall place the employee on leave without pay.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 7. PERFORMANCE MANAGEMENT**R2-5A-701. General**

- A.** Performance management system. The Director shall establish a performance management system to evaluate the job performance of state employees. The performance management system established by the Director shall contain performance rating levels and shall contain numerical points to apply to each performance rating level established.
- B.** Administration. The Director shall develop an administrative manual and training on the performance management system.
- C.** Exceptions. The performance management system may be used:
 - 1. As determined by the appointing authority for the agency head, to evaluate the job performance of the agency head.
 - 2. As determined by the agency head, to evaluate the job performance of:
 - a. Each deputy director, or equivalent, of the agency.

- b. Each assistant director, or equivalent, of the agency.

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

- A.** Performance plan. For the purposes of this subsection, "performance plan" means a document prepared by an employee's supervisor that outlines what is expected of the employee and how the employee's performance will be measured. Subject to review by agency management, a supervisor:
 - 1. Shall administer a performance plan for each employee within 30 days of becoming the employee's supervisor.
 - 2. May modify a performance plan at any time during a performance period.
 - 3. Shall modify a performance plan when significant responsibilities or expectations are added to or removed from a position.
 - 4. Shall notify the affected employee of any modifications made to a performance plan under subsection (A)(2) or (3).
- B.** Performance evaluation requirements.
 - 1. Informal evaluation. A supervisor shall:
 - a. Monitor and evaluate an employee's performance throughout the rating period,
 - b. Provide feedback to the employee on a regular basis, and
 - c. Attempt to correct inadequate performance where possible and appropriate.
 - 2. Formal evaluation. A supervisor shall:
 - a. Formally evaluate, document and rate the performance of each employee at least annually.
 - b. Submit the evaluation to agency management for review prior to the evaluation being administered to the employee.
 - 3. Covered probationary employees. Prior to granting a covered probationary employee permanent status, a supervisor shall evaluate a probationary employee at least once prior to the end of the employee's probationary period.
- C.** Responsibilities.
 - 1. An employee shall comply with the performance plan established by the supervisor.
 - 2. A supervisor shall comply with performance evaluation requirements.
 - 3. An agency head shall ensure that all performance evaluations are completed as required by this Section.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 8. DISCIPLINARY ACTIONS**R2-5A-801. General**

- A.** Authority. An agency head has the primary authority and responsibility for managing the conduct of all employees within an agency. A covered employee may be disciplined only for cause. An agency head shall discipline a covered employee in accordance with this Article and the rules in Subchapter B of this Chapter. An uncovered employee serves at the pleasure of the appointing authority and may be dismissed at will. Except for an employee who is in a position listed in A.R.S. § 41-742(F), any action that involves a suspension greater than 80 working hours, an involuntary demotion, or a dismissal requires review by the Director prior to the agency head administering such action.
- B.** Level of discipline.
 - 1. If an agency head deems it necessary to discipline an employee, the agency head may determine the level of discipline to be imposed, up to and including dismissal, subject to review by the Director, if applicable.
 - 2. In determining the level of discipline to be imposed, the agency head may consider the following factors:
 - a. Consistent application of rules and standards,

- i. Unless otherwise prescribed by statute, the agency head need only consider those cases decided under the administration of the current agency head. Decisions in cases prior to the administration of the current agency head are not binding upon the current agency head and are not relevant in determining consistent application of rules and standards.
 - ii. In determining consistent application of rules and standards, the disciplinary actions imposed by one agency may not be binding upon any other agency and may not be used for comparison purposes in hearings wherein the consistent application of rules and standards is at issue.
 - b. Prior knowledge of rules and standards,
 - c. The severity of the infraction,
 - d. The repeated nature of violations,
 - e. Prior corrective or disciplinary actions,
 - f. Previous oral discussions,
 - g. The employee's past work record,
 - h. The effect on agency operations,
 - i. The potential of the violations for causing damage to persons or property.
- C. Limitations.**
- 1. Except as otherwise provided by statute or rule, suspensions shall not exceed a total of 30 working days during any 12-month period. The 12-month period begins with the first day of the first suspension.
 - 2. An employee who is involuntarily demoted must possess the qualifications for the position and:
 - a. A covered employee who has attained permanent status may be involuntarily demoted only to a regular position in the covered service.
 - b. An uncovered employee may be involuntarily demoted only to a position in the uncovered service.
- D. Review by Director.**
- 1. Letters of reprimand and suspensions without pay of 80 working hours or less are not subject to review by the Director.
 - 2. Prior to imposing a suspension greater than 80 working hours, an involuntary demotion, or dismissal, the agency head shall submit the proposed action to the Director for review as prescribed in R2-5A-802, unless the employee is in a position listed in A.R.S. § 41-742(F). If the employee is in a position listed in A.R.S. § 41-742(F), a review by the Director is not required.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-802. Procedures for Review by the Director

- A.** Prior to administering any action requiring review by the Director, the agency head shall submit the proposed letter to the Director prior to the date the agency head intends to issue the letter to the employee.
- B.** The Director shall review the agency head's proposed action and provide notification of concurrence or recommend modification to the proposed action.
- C.** When the agency head administers the action to an employee, the agency head shall also send a copy of the employee's letter to the Director. If the agency head determines that no action will be taken, the agency head shall notify the Director.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5A-803. Employee Request for Review of Disciplinary Action

- A.** A covered employee who is issued a disciplinary action may have grievance or appeal rights, as applicable.
- B.** An uncovered employee does not have grievance rights or the right of appeal to a state merit board or council.
- C.** A covered employee who files a complaint on a disciplinary action alleging discrimination or harassment is precluded from also filing a grievance through the agency's grievance procedure on the same disciplinary action that is the subject of the employee's complaint.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 9. COMPLAINTS

R2-5A-901. Complaint System

- A. General.** Each agency head shall:
 - 1. Adopt a procedure to address employee complaints concerning discrimination or harassment in compliance with this rule.
 - 2. Designate an employee of the agency to serve as the agency's complaint coordinator, who shall be responsible for receiving complaints, determining applicability under the complaint system, investigating or assigning the complaint to the appropriate individual within the agency for review or investigation, and tracking the processing of complaints.
- B. Matters subject to the complaint system.** The adopted complaint procedure shall require the complainant to file the complaint with the agency complaint coordinator within 180 days of the action giving rise to the complaint and to clearly outline the allegations to be addressed, including whether the basis of the complaint is based on:
 - 1. Unlawful discrimination based on race, color, religion, sex (including pregnancy), age, national origin, genetic information or on the basis of a disability.
 - 2. Allegation of sexual harassment or other form of harassment.
 - 3. Retaliation for filing a complaint.

4. Retaliation or intimidation for exercising any right under state or federal law.
- C. Preparation. A complainant shall not be allowed the use of state time or state property to prepare a complaint, prepare for a meeting with agency management or to meet with a representative. Subject to supervisory approval, a complainant may request available compensatory or annual leave for this purpose.
- D. Multiple complaints. Multiple complaints by an employee may be consolidated into a single complaint. Separate complaints filed by two or more employees regarding the same issue or issues may be consolidated into a group complaint. Employees having a common complaint may submit one group complaint, identifying one complainant as the selected spokesperson for the group. Employees who choose to file a group complaint are prohibited from filing separate complaints on the same issue.
- E. Amendments. Once a complaint is submitted to the agency complaint coordinator, it may not be amended. If additional documentation is submitted by the complainant after the initiation of the complaint, the reviewing or investigating official may remand the complaint to the complainant for reconsideration and resubmission.
- F. Approval. Each agency will submit its proposed complaint procedure and any subsequent changes to the Director for approval.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

- A. Content. Each agency complaint procedure shall include as a minimum that:
 1. The agency head be notified of all verbal or written complaints of discrimination or harassment reported by an employee immediately upon receipt of a complaint.
 2. Employees who are told or otherwise become aware that discrimination or harassment is occurring must immediately report the allegation or complaint to the agency's complaint coordinator.
 3. The complaint include all facts and circumstances involved in the alleged violation, including:
 - a. Description of the incident(s),
 - b. Name(s) of individual(s) involved,
 - c. Name(s) of witness(es),
 - d. The date(s) the discrimination or harassment occurred (if known),
 - e. Resolution sought,
 - f. Federal or state law alleged to have been violated.
 4. The agency complaint coordinator shall acknowledge receipt of the complaint in writing to the complainant not later than five business days after receipt of the written complaint.
 5. The agency complaint coordinator shall initiate an investigation into the alleged complaint or assign the complaint to the appropriate individual within the agency for review or investigation within 10 business days and the review or investigation shall be completed within 60 business days of receipt of the written complaint. If extenuating circumstances exist, an extension shall be requested through the agency complaint coordinator.
 6. Barring resolution of the complaint by agreement of the parties, the agency complaint coordinator shall forward a written recommendation to the agency head, or designee, within 10 business days of completion of the review or investigation.
 7. The agency head, or designee, shall review the findings and recommendations and issue a decision in writing to the complainant.
 8. A statement advising that retaliation against an employee for filing a complaint in good faith will not be tolerated or permitted.
 9. A statement specifying that a grievance filed by a covered employee under R2-5B-403 that includes an allegation of discrimination or harassment shall be reviewed or investigated under the provisions of this Article, and not the grievance system.
- B. Review by Director.
 1. An employee, other than a Department of Administration employee, who is not satisfied with the agency head's response to a complaint alleging discrimination or harassment, may elevate the complaint to the Director within five business days after the receipt of the agency head's response. The Director will furnish a copy of the final decision to the agency head and the complainant within 20 business days following receipt of the complaint by the Director. The 20 business days may be extended by the Director with the concurrence of the complainant. The decision of the Director is the final step in the complaint procedure.
 2. A complainant who is a Department of Administration employee and who is not satisfied with the Director's decision on a complaint alleging discrimination or harassment may resubmit the complaint to the Director within five business days after receipt of the Director's decision. The Director will appoint an individual who is not an employee of the Department of Administration and who serves in a position that is assigned to manage an agency's employee relations or investigations work unit to investigate the resubmitted complaint. The investigator shall conduct an investigation and furnish a copy of the findings and final decision to the Director and the complainant within 20 business days following receipt of the complaint by the investigator. The 20 business days may be extended by the investigator with the concurrence of the complainant. The decision of the investigator is the final step in the complaint procedure.
 3. The response will refer the employee to the appropriate entity if the employee is dissatisfied with the final step of the complaint procedure.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 10. SEPARATIONS

oA. Resignation. An employee may terminate employment with the state by submitting a written resignation to the agency head. An employee should submit a resignation at least 10 business days prior to the effective date of the resignation. If an employee resigns orally, the agency head shall confirm the resignation in writing. An agency head may refuse to accept a resignation and separate the employee pursuant to R2-5A-1002.

- B.** Job abandonment. An agency head may consider an employee to have voluntarily resigned from employment with the agency when the employee is absent from duty for three consecutive workdays or equivalent without proper authorization.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

- A.** General. An agency head may terminate an employee as deemed necessary to meet the needs of the agency and in keeping with federal and state laws and regulations. A covered employee may be dismissed only for cause. An agency head shall dismiss a covered employee in accordance with Article 8 and the rules in Subchapter B of this Chapter.
- B.** Staff reduction. At times, a staff reduction is necessary due to lack of work, lack of funds, economic slowdowns, technological or structural changes in the agency's operations, or because a staff reduction is determined to be necessary to ensure the financial health and viability of the agency.
1. Except for an employee who is in a position listed in A.R.S. § 41-742(F), a staff reduction of an uncovered employee requires review by the Director prior to the agency head administering such action.
 2. An agency head shall conduct staff reductions of covered employees in accordance with Subchapter B, Article 6, Reduction in Force.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

SUBCHAPTER B. COVERED EMPLOYEES

ARTICLE 1. GENERAL

In addition to the definitions provided in Subchapter A of this Chapter, the following definitions apply to this Subchapter:

"Limited appointment employee" means an employee who, before September 29, 2012, was subject to the provisions of A.R.S. Title 41, Chapter 4, Articles 5 and 6 that were in effect before September 29, 2012, was appointed to a position that was based on the duration of funding, and was not eligible to acquire reduction in force rights.

"Original probationary period" means the specified period following initial appointment to covered service. A.R.S. § 41-741(10)

"Permanent status" means the standing a covered employee achieves after the completion of an original probation or a promotional probation.

"Probationary period" means a working test period of employment in a covered service position for evaluation of the employee's work. A.R.S. § 41-741(11)

"Promotional probation" means the specified period of employment following promotion of a permanent status employee to another covered position that has a higher pay grade. A.R.S. § 41-741(12)

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-102. Applicability

- A.** The rules in this Subchapter are applicable to covered positions, applicants for covered positions and covered employees in the State Personnel System.
- B.** Covered service is limited to the following:
1. An employee who was in the state service as either a probationary or permanent status employee, was not required to become at will uncovered in accordance with A.R.S. Title 41, Chapter 4, Article 4, and who does not:
 - a. Voluntarily elect to become uncovered at will.
 - b. Voluntarily accept a change in assignment to a position in the uncovered service.
 - c. Have a break in service.
 2. A newly hired employee who is appointed or a current uncovered employee who voluntarily accepts a change in assignment to:
 - a. A position in the Arizona Department of Corrections that is classified as a Correctional Officer I, Correctional Officer II, Correctional Officer III, or a Community Corrections Officer; or
 - b. A position in any state agency that requires certification as a full authority peace officer by the Arizona Peace Officer Standards and Training Board, provided the position is not in the uncovered service.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

ARTICLE 2. EMPLOYMENT STATUS

R2-5B-201. Applicability

The rules under this Article are applicable only to positions in the covered service and covered employees.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-202. Original Probation

- A. General. A new employee hired into a position in the covered service shall serve an original probation period of one year.
- B. Extension of probation.
 - 1. An agency head may extend an employee's original probation up to six additional months for employment-related reasons.
 - 2. The probationary period shall be extended for any period for which a probationary employee is on leave without pay for more than 80 consecutive working hours. If original probation is extended for this reason, the employee's probation may exceed 18 months.
- C. Completion of original probation.
 - 1. In accordance with the rules in Subchapter 5A, Article 7, a supervisor shall evaluate an original probationary employee and submit a report to the agency head before expiration of the employee's probationary period. If the agency head takes no action to extend the probationary period or to terminate the employee, the agency head shall grant permanent status to the employee upon completion of the probationary period.
 - 2. If an agency head determines at any time during an original probationary period that the services of a probationary employee are no longer required in that position for any reason or for no reason, the agency head may:
 - a. Dismiss the employee without a stated reason and without the right of appeal, providing the employee a letter of dismissal; or
 - b. Offer the employee another position for which the employee possesses the qualifications. An employee who accepts a position that is not in the covered service is an at will uncovered employee.
- D. Change in position. An original probation employee who is selected for another position in the covered service shall serve an original probation period in the new position.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-203. Promotional Probation

- A. General. A permanent-status employee who is promoted to a position in the covered service shall serve a promotional probation period of six months.
- B. Extension of probation.
 - 1. An agency head may extend an employee's promotional probation up to six additional months for employment-related reasons.
 - 2. The probationary period shall be extended for any period for which a probationary employee is on leave without pay for more than 80 consecutive working hours. If promotional probation is extended for this reason, the employee's probation may exceed one year.
- C. Completion of promotional probation.
 - 1. In accordance with the rules in Subchapter 5A, Article 7, a supervisor shall evaluate a promotional probationary employee and submit a report to the agency head before expiration of the employee's probationary period. If the agency head takes no action to extend the probationary period, to revert or separate the employee, or offer the employee another position, the agency head shall grant permanent status to the employee upon completion of the probationary period.
 - 2. If an employee fails to complete a promotional probation successfully the agency head may revert the employee in the current employing agency to:
 - a. A vacant position in the class in which the employee held permanent status immediately before promotion, or
 - b. A similar position in another class at the same grade as the class that the employee holds permanent status if the employee possesses the qualifications for that position.
- D. Discipline. Neither subsection (C)(2)(a) nor (b) shall preclude the imposition of disciplinary action.
- E. Failure to complete promotional probation. An employee who is reverted shall not have the right to appeal.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-204. Permanent Status

A covered employee who has successfully completed the employee's probationary period shall attain permanent status in the position.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-205. Change from Covered to Uncovered Service

- A. Voluntary election. A covered employee may voluntarily elect to become an at will uncovered employee without a change in assignment. Such an election is subject to the approval of the head of the employing agency and the Director. If approved, the effective date of the employee's change to uncovered service shall be the first day of the pay period immediately following the Director's approval.
- B. Change in assignment. Except for a special assignment, a covered employee who voluntarily accepts a change in assignment to a position that is not in the covered service, regardless of whether the voluntary change in assignment is a promotion, demotion, or lateral transfer, is an at will uncovered employee. The effective date of the employee's change to uncovered service shall be the same as the effective date of the change in assignment. A special assignment is not a change in assignment.
- C. Return to state employment. A covered employee who has a break in service and returns to employment in an agency in the State Personnel System in any capacity shall be an at will uncovered employee, unless the appointment is to a position in the covered service.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

ARTICLE 3. DISCIPLINARY ACTIONS**R2-5B-301. General**

- A. Applicability. The rules under this Article are applicable only to covered employees.
- B. Review by Director. Disciplinary actions for covered employees are subject to the review requirements outlined in R2-5A-801(D) and R2-5A-802.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-302. Reprimand

- A. Authority. An agency head may issue a written reprimand to an employee for cause.
- B. Reprimand Procedures. The agency head shall provide the employee with a written statement of the reasons for the reprimand and the employee's grievance rights.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-303. Suspension

- A. Authority. An agency head may suspend an employee without pay for cause.
- B. Limitation. Except as otherwise provided by statute or rule, suspensions shall not exceed a total of 30 working days during any 12-month period. The 12-month period begins with the first day of the first suspension.
- C. Pre-suspension procedures for suspensions exceeding 80 working hours. Before an employee with permanent status can be suspended for more than 80 working hours, the agency head shall submit the proposed action to the Director for review as prescribed in R2-5A-802, give the employee written notice of the charges, a summary of the agency head's basis for the charges, and an opportunity for the employee to present a written response. The employee's response shall be made not later than three business days after the employee receives notice of the charges, unless extended in writing by the agency head.
- D. Suspension procedures. The agency head shall provide the employee with a written statement of the reasons for the suspension. The statement shall specify the period of suspension and the employee's grievance or appeal rights.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-304. Involuntary Demotion

- A. Authority. An agency head may involuntarily demote a permanent status employee for cause to any covered position in the employing agency, provided the employee possesses the qualifications for such position.
- B. Pre-demotion procedures. Before an employee with permanent status can be involuntarily demoted, the agency head shall submit the proposed action to the Director for review as prescribed in R2-5A-802, give the employee written notice of the charges, a summary of the agency head's basis for the charges, and an opportunity for the employee to present a written response. The employee's response shall be made not later than three business days after the employee receives notice of the charges, unless extended in writing by the agency head.
- C. Involuntary demotion procedures. Prior to the effective date of the involuntary demotion, a written notice containing specific reasons for the demotion and the employee's right of appeal shall be provided to the employee and the Director.
- D. Probation. Except as otherwise provided in these rules, an employee who is involuntarily demoted shall not be required to serve a probationary period in the position to which demoted.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-305. Dismissal

- A. Relief from duty. Nothing in this rule shall preclude the agency head from immediately placing an employee on administrative leave pending implementation of procedures under this Section, but no pay shall be withheld for such period.
- B. Dismissal during original probation. An employee on original probation may be dismissed without a stated reason and without the right of appeal.
- C. Pre-dismissal procedures. Before an employee with permanent status can be dismissed, the agency head shall submit the proposed action to the Director for review as prescribed in R2-5A-802, give the employee written notice of the charges, a summary of the agency head's basis for the charges, and an opportunity for the employee to present a written response. The employee's response shall be made not later than three business days after the employee receives notice of the charges, unless extended in writing by the agency head.
- D. Dismissal procedures. The agency head may dismiss an employee with permanent status only for cause but not before attempting to serve the employee personally or by registered or certified mail, return receipt requested (addressee only), with written notice of the specific reasons for dismissal in sufficient detail to inform the employee of the facts, with a copy to the Director. The agency head shall include a statement of the employee's right to appeal.

- E. Effective date of dismissal. The dismissal action is not effective until one of the following occurs:
1. The employee signs for receipt of the dismissal letter personally served or served by mail;
 2. Three business days have passed since the letter was mailed to the employee; or
 3. An attempt is made to personally serve the dismissal letter, but the employee refuses to sign for the letter. Such attempt to personally serve the letter shall be witnessed.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 4. GRIEVANCES

R2-5B-401. Applicability

The rules under this Article are applicable only to covered employees.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-402. Grievance System

- A. General. Each agency that has one or more covered employees shall:
1. Adopt a grievance procedure which will afford each covered employee a systematic means of resolving an employee's disagreement with the receipt of a disciplinary action that is either:
 - a. A written reprimand, or
 - b. A suspension of:
 - i. 40 working hours or less if the employee is a full authority peace officer, or
 - ii. 80 working hours or less if the employee is a covered employee in any other capacity.
 2. Designate an employee of the agency to serve as the agency's grievance coordinator, who shall be responsible for receiving grievances, determining applicability under the grievance system, forwarding the grievance to the appropriate individual within the agency for review or investigation, and tracking the processing of grievances.
- B. Non-applicable matters. The adopted grievance procedure shall not apply to any matter for which another method of review is provided, including but not limited to:
1. Retirement, Life Insurance, or Health Insurance;
 2. Any classification action;
 3. Any recruitment, selection, or appointment;
 4. Any compensation action;
 5. A disciplinary action that is either:
 - a. A suspension of:
 - i. More than 40 working hours if the employee is a full authority peace officer, or
 - ii. More than 80 working hours if the employee is a covered employee in any other capacity,
 - b. A demotion, or
 - c. A dismissal.
 6. A complaint alleging discrimination or harassment; or
 7. Any reduction in force action.
- C. Restrictions. An employee may not submit a grievance challenging the following management rights:
1. An agency head's right to direct agency employees.
 2. An agency head's right to hire, promote, transfer, assign, and retain employees.
 3. An agency head's right to maintain efficiency of government operations and to determine the methods, means, and personnel by which these operations are to be conducted.
- D. Preparation. A grievant shall not be allowed the use of state time or state property to prepare a grievance, prepare for a meeting with agency management or to meet with a representative. Subject to supervisory approval, a grievant may request available compensatory or annual leave for this purpose.
- E. Steps. An agency's grievance procedure shall have two steps for review.
1. As determined by the agency head, the first step in the grievance procedure shall be:
 - a. The employee's second line supervisor,
 - b. The assistant director or equivalent, or
 - c. Any level of management between (a) and (b).
 2. The final step in the grievance procedure shall be the agency head, or designee.
 3. An agency head may choose to incorporate an additional step in the agency grievance procedure after the first step review.
- F. Amendments. Once a grievance is submitted to the first step, it may not be amended. If additional documentation is submitted by the grievant after the initiation of the grievance, the reviewing official may remand the grievance to the appropriate previous level for reconsideration.
- G. Approval. Each agency head will submit the agency's proposed grievance procedure and any subsequent changes to the Director for approval.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-403. Grievance Procedures

Content. The grievance procedure established in each state agency shall include as a minimum:

1. An initial statement that any complaint alleging unlawful discrimination or unlawful harassment will be reviewed or investigated according to the provisions of the separate complaint process outlined in Subchapter A, Article 9, and not the grievance system.
2. A requirement that the grievant have an oral discussion with the immediate supervisor in an attempt to resolve the employee's disagreement with the disciplinary action, prior to initiating the written grievance procedure.
3. A requirement that the employee file the grievance in writing with the agency grievance coordinator, within 10 business days after the occurrence of the action being grieved. The date of occurrence of a:
 - a. Reprimand is the date the reprimand was issued to the employee.
 - b. Suspension is the first day of suspension.
4. A requirement that the grievance contain a complete statement of all the facts and circumstances involved and the specific redress sought.
5. A provision that the grievant may select a representative at any step in the procedure after the oral discussion with the immediate supervisor.
6. A requirement that another state employee who serves as the representative of a grievant must receive approval for annual or compensatory leave to represent the grievant.
7. A requirement that the grievant must have a minimum of five business days after receipt of a response to forward the grievance at any step, must sign the grievance at each step, and must state the reasons why the response at the previous step was unsatisfactory.
8. A requirement that the agency head will respond to the grievant not later than 30 business days after receipt of the grievance at the first step. Within the 30 business day period, the time for any step may be extended by the agency head with the concurrence of the grievant.
9. A statement that the decision of the agency head is the final step in the grievance process.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 5. APPEALS**R2-5B-501. Applicability**

The rules under this Article are applicable only to covered employees who have attained permanent status.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-502. General

- A. Except for an employee who is a full authority peace officer, an employee may file an appeal on the receipt of a disciplinary action that is either:
 1. A suspension for more than 80 working hours,
 2. An involuntary demotion, or
 3. A dismissal.
- B. Such appeals shall be filed with the State Personnel Board and in accordance with the rules established by the Board.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-503. Full Authority Peace Officers

- A. A full authority peace officer may file an appeal on the receipt of a disciplinary action that is either:
 1. A suspension for more than 40 working hours,
 2. An involuntary demotion, or
 3. A dismissal.
- B. Such appeals shall be filed with the Law Enforcement Merit System Council and in accordance with the rules established by the Council.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

ARTICLE 6. REDUCTION IN FORCE**R2-5B-601. Applicability**

The rules under this Article are applicable only to covered positions and covered employees.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

R2-5B-602. Reduction in Force Procedures

- A. General.
 1. An agency head shall submit to the Director a proposal to conduct a reduction in force if required for one or more of the following reasons:

- a. Lack of funds or work,
 - b. Abolition of one or more covered positions,
 - c. Material change in job duties or agency organization, or
 - d. Introduction of a cost reduction initiative.
2. An agency head shall submit the proposal for a reduction in force at least 30 business days before the proposed effective date of the reduction in force. If circumstances beyond the agency's control do not permit at least 30 business days' notice, the agency head shall submit the proposal as soon as the agency head is aware of the necessity for a reduction in force.
 3. An agency head shall include all of the following in the proposal for a reduction in force:
 - a. The reason for the reduction in force;
 - b. The proposed scope of the reduction in force, which shall be limited to either:
 - i. The agency,
 - ii. An organizational unit of the agency, or
 - iii. Agency operations within a geographic area,
 - c. Each specific covered position proposed for elimination and an organization chart identifying each position, and
 - d. The proposed effective date of the reduction in force.
 4. An agency head shall submit a proposal that is consistent with A.R.S. § 41-772 and this Section.
 5. An agency head shall not approve a personnel action that would have an effect on the reduction in force after the agency head has submitted a proposal for a reduction in force.
 6. An agency head shall not re-establish a position that was abolished as a result of a reduction in force for two years if the position was filled when the reduction in force occurred, unless the position was abolished due to fiscal constraints, legislative action, or court order.
- B. Administration of reduction in force.** The Director shall review and approve, modify or deny a reduction in force within 20 business days of receipt. Upon approval of the Director to conduct a reduction in force:
1. An agency head shall separate a covered employee who is not a permanent status employee in the class affected by the reduction in force in the following order before any reduction in force action is taken that affects a permanent status employee, provided the separation of the non-permanent status employee will accomplish, or assist in accomplishing, the purpose of the reduction in force:
 - a. Temporary employee,
 - b. Original probationary employee, and
 - c. Limited appointment employee.
 2. An agency head shall use retention points to identify a permanent status employee within a class series affected by a reduction in force for retention in the employee's current position, transfer, reduction, or separation based on the employee's relative standing on the retention point list.
 3. An agency head shall base retention points upon performance calculated in accordance with the instructions in subsections (C) and (D).
 4. An employee on promotional probation or special assignment shall compete for retention in the employee's permanent status class.
 5. An employee in an underfill position shall compete for retention in the employee's permanent status class.
 6. A permanent part-time employee shall compete for retention against another permanent part-time employee in the same class.
- C. Calculation of retention points.** An agency head shall compute the average score of a maximum of the three most recent performance evaluations in the 24 months concluded before the date of proposal for a reduction in force. An employee's average score shall be the employee's retention points. If an employee has not had a performance evaluation in the past 24 months, the employee shall receive 2.0 retention points.
- D. Resolution of ties.** An agency head shall break any tie in total retention points in the following manner and order:
1. The employee with the highest most recent performance evaluation shall be given preference.
 2. If a tie continues to exist, the agency head shall break the tie by lot.
- E. Offer of position.**
1. An agency head shall provide written notice at least five business days in advance to each employee identified for transfer, reduction, or separation. If circumstances beyond the agency's control do not permit at least five business days' notice, the agency head shall provide notice as soon as the agency head is aware of the necessity to transfer, reduce, or separate the employee.
 2. The notice shall include:
 - a. The reason for and effective date of the action;
 - b. A job offer, if any, including the salary, location of the position, and supervisor's name;
 - c. The availability of reduction in force procedures and records for review, with references to relevant statutes and rules; and
 - d. The employee's right to request a review of the determination as provided in R2-5B-603.
 3. An agency head shall offer a position to an employee identified for transfer, reduction, or separation with the highest number of points on the retention point list in descending order as follows:
 - a. If a vacant covered position exists and an employee possesses the required qualifications for the position, an agency head shall make the single best offer, in terms of pay range, within the agency of:
 - i. A regular position at the same or lower pay range in the same class series as the employee's present permanent status position;

- ii. A regular position at the same or lower pay range in any class series in which the employee has held permanent status during the past five years; or
 - iii. If both positions described in subsections (E)(3)(a)(i) and (ii) are available, the position described in subsection (E)(3)(a)(i).
 - b. If the offer under subsection (E)(3)(a) is a position at a lower pay range, the agency head shall provide the employee the option of accepting a vacant covered:
 - i. Funded, regular position at the employee's present pay range in a class series in which the employee has never held permanent status for which the employee is qualified; or
 - ii. Temporary or part-time position at the employee's present pay range for which the employee is qualified.
4. An employee shall possess the qualifications required when the position was last filled, unless the Director grants an exception.
5. Any job offer shall contain a time period of not less than three business days in which the employee may accept the offer. Failure of an employee to reply in writing within the stated time period, or failure to accept the job offer, shall constitute a resignation. An employee may accept a job offer and retain the right to request a review of the determination.
6. If no position exists, the agency head may separate the employee.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4). Amended by exempt rulemaking at 19 A.A.R. 717 effective April 13, 2013 (Supp. 13-1).

R2-5B-603. Employee Request for Review

- A. An employee may request a review of the following determinations made during a reduction in force:
 1. Calculation of the employee's retention points,
 2. A job offer resulting in the employee's transfer or reduction, and
 3. Notification of the employee's separation.
- B. Within three business days of receipt of a determination notice, unless a longer period is authorized by an agency head, an employee may submit a written request to the agency head for a review of the determination. The request for review shall be based upon an error, contain specific information concerning the error involved, and include a proposed resolution of the problem.
- C. The agency head shall review the request and respond to the employee within five business days after receipt of the request.
- D. An agency head may postpone any portion of a reduction in force until completion of an employee request for review.

Historical Note

Section made by exempt rulemaking at 18 A.A.R. 2782, effective September 29, 2012 (Supp. 12-4).

Attachment B

Authorizing Statutes

1-301. Holidays enumerated

A. The following days shall be holidays:

1. Sunday of each week.
2. January 1, "New Year's Day".
3. Third Monday in January, "Martin Luther King, Jr./Civil Rights Day".
4. Third Monday in February, "Lincoln/Washington Presidents' Day".
5. Second Sunday in May, "Mothers' Day".
6. Last Monday in May, "Memorial Day".
7. Third Sunday in June, "Fathers' Day".
8. July 4, "Independence Day".
9. First Sunday in August, "American Family Day".
10. First Monday in September, "Labor Day".
11. September 17, "Constitution Commemoration Day".
12. Second Monday in October, "Columbus Day".
13. November 11, "Veterans' Day".
14. Fourth Thursday in November, "Thanksgiving Day".
15. December 25, "Christmas Day".

B. When any of the holidays enumerated in subsection A falls on a Sunday, the following Monday shall be observed as a holiday, with the exception of the holidays enumerated in subsection A, paragraphs 1, 5, 7, 9 and 11.

C. When any of the holidays enumerated in subsection A, paragraphs 2, 8, 13 and 15 falls on a Saturday, the preceding Friday shall be observed as a holiday.

D. When the holiday enumerated in subsection A, paragraph 11 falls on a day other than Sunday, the Sunday preceding September 17 shall be observed as such holiday.

16-402. Absence from employment for purpose of voting; application therefor; violation; classification

A. A person entitled to vote at a primary or general election held within this state may, on the day of election, absent himself for the purpose of voting from the service or employment at which he is employed if there are less than three consecutive hours between the opening of the polls and the beginning of his regular workshift or between the end of his regular workshift and the closing of the polls. In such event, he may absent himself for such length of time at the beginning or end of his workshift that, when added to the time difference between workshift hours and opening or closing of the polls, will provide a total of three consecutive hours. He shall not, because of such absence, be liable for any penalty, nor shall any deduction be made therefor from his usual salary or wages. Application shall be made for such absence prior to the day of election, and the employer may specify the hours during which the employee may absent himself.

B. A person who refuses an employee the right conferred by this section, or who subjects an employee to a penalty or reduction of wages therefor, or who directly or indirectly violates the provisions of this section, is guilty of a class 2 misdemeanor.

23-391. Overtime pay; work week

A. Subject to availability of appropriated funds, an employee of this state or any political subdivision serving in a position determined by the law enforcement merit system council, the director of the department of administration, the Arizona board of regents, the board of directors for the Arizona state schools for the deaf and the blind or the governing body of a political subdivision, in the discretion of the board or body, to be eligible for overtime compensation who is required to work in excess of the person's normal work week shall be compensated for the excess time at the following rates:

1. One and one-half times the regular rate at which the person is employed or one and one-half hours of compensatory time off for each hour worked if overtime compensation is mandated by federal law.
2. If federal law does not mandate overtime compensation, the person shall receive the regular rate of pay or compensatory leave on an hour for hour basis at the discretion of the board or governing body.

B. Notwithstanding subsection A of this section, the state or a political subdivision may provide, by action of the law enforcement merit system council, the Arizona board of regents, the board of directors for the Arizona state schools for the deaf and the blind or the director of the department of administration in the case of the state or of the governing body of the political subdivision, for a work week of forty hours in less than five days for certain classes of employees employed by the state or the political subdivision.

C. For state agencies of the state personnel system, unless otherwise provided by law, the state work week is the period of seven consecutive days starting Saturday at 12:00 a.m. and ending Friday at 11:59 p.m. Notwithstanding any other law, the director of the department of administration may authorize a workday, for the method and purpose of recording time entries to be included in a workweek and a pay period for employees of this state who are in the correctional officer class series of the state department of corrections who are regularly scheduled to work a shift that spans two calendar days, defined as the day a majority of the hours are regularly scheduled to be worked. If the regularly scheduled hours are equally split between two calendar days, the workday is defined as the day the shift ends. Scheduled shift start and end times shall not be adjusted to avoid the payment of overtime.

23-392. Overtime compensation for certain law enforcement or probation officer activities; option; definitions

A. Subject to subsection B of this section, any person engaged in law enforcement activities shall be compensated for each hour worked in excess of forty hours in one work week, unless otherwise agreed to by the employer and the person engaged in law enforcement activities, at the option of the employer at the following rates:

1. One and one-half times the regular rate at which the person is employed or one and one-half hours of compensatory time off for each hour worked if by the person's job classification overtime compensation is mandated by federal law.

2. If by the person's job classification federal law does not mandate overtime compensation, the person shall receive the regular rate of pay or compensatory leave on an hour for hour basis.

B. If an employee and employer have an agreement pursuant to subsection A of this section regarding the employee's alternate work period and the employee becomes employed in a new position with the employer, the employee may terminate the existing alternate work period agreement.

C. Subsection A of this section does not preempt agreements that supplant, revise or otherwise alter the provisions of this section, including preexisting agreements between the employer and the law enforcement officer or the law enforcement officer's lawful representative association.

D. Any person engaged in probation officer activities shall be compensated for each hour worked in excess of eighty hours in a two week work period at the option of the employer at the following rates:

1. One and one-half times the regular rate at which the person is employed or one and one-half hours of compensatory time off for each hour worked if by the person's job classification overtime compensation is mandated by federal law.

2. If by the person's job classification federal law does not mandate overtime compensation, the person shall receive the regular rate of pay or compensatory leave on an hour for hour basis.

E. Paid leave may be considered hours worked for the purpose of calculating overtime.

F. The director of the department of public safety may establish alternate work periods, in accordance with federal law, for the purpose of determining overtime compensation for those employees of the air rescue section of the department of public safety.

G. Notwithstanding subsection E of this section, an alternate work period established by the director of the department of public safety for the purpose of determining overtime compensation shall not exceed twenty-eight days or one hundred sixty hours.

H. For the purposes of this section:

1. "Person engaged in law enforcement activities":

(a) Means:

(i) A law enforcement officer as defined by section 38-1001.

(ii) A peace officer as defined by section 41-1701.

(iii) Any security personnel responsible for controlling or maintaining custody of inmates in correctional institutions maintained by this state or a county, city or town.

(iv) Any law enforcement personnel under section 41-1714 responsible for directly assisting law enforcement officers in the performance of law enforcement activities.

(b) Does not include any person employed in a bona fide executive or administrative capacity as defined by the employer.

2. "Person engaged in probation officer activities":

(a) Means a probation officer or surveillance officer who is appointed pursuant to section 8-203, 12-251 or 12-259.

(b) Does not include any person employed in a bona fide executive or administrative capacity as defined by the employer.

35-196.01. Expenditure of state monies for certain purposes; report

A. Subject to the approval of the director of the department of administration, a budget unit may spend any monies for either of the following:

1. Transportation or other travel expenses necessary for bringing any person into this state who is not a resident of this state for an interview for prospective employment.
2. Transportation or moving expenses for any person newly employed or retained.

B. A budget unit may spend monies to reimburse current employees for reasonable relocation expenses related to management initiated geographical reassignments of more than fifty miles from an employee's current work site pursuant to rules adopted by the director of the department of administration.

C. On or before September 1 of each year, a budget unit shall report to the governor's office of strategic planning and budgeting and the joint legislative budget committee regarding any monies spent for the prior fiscal year for the purposes prescribed in this section.

38-401. Office hours for state offices

State offices shall be kept open for transaction of business from eight o'clock a.m. until five o'clock p.m. each day from Monday through Friday except:

1. On holidays.
2. In implementing an agency furlough if the department of administration has authorized the state office to be closed in order to meet the furlough requirements. An agency that receives this authorization shall ensure that appropriate notice is given to notify the public of the office closure.
3. As otherwise provided by law.

38-492. Preferences

A. A veteran of the armed forces of the United States who is separated from the armed forces under honorable conditions following more than six months of active duty and who takes an examination for employment by this state or any political subdivision of this state under a merit system of employment as provided by section 38-491, in the determination of the veteran's final rating on the examination, shall be given a preference of five points over persons other than veterans. The preference shall be added to the grade earned by the veteran, but only if the veteran earns a passing grade without preference. Any veteran who is entitled under 10 United States Code chapter 1223 to retired pay for non-regular service or, but for age, would be entitled under that chapter to retired pay for non-regular service and who takes an examination for employment by any political subdivision of this state under a merit system of employment as provided by section 38-491, in the determination of the veteran's final rating on the examination, shall be given a preference of five points over persons other than veterans. The preference shall be added to the grade earned by the veteran, but only if the veteran earns a passing grade without preference.

B. A person with a disability who takes an examination for employment by this state or any political subdivision of this state under a merit system of employment, in the determination of the person's with a disability final rating on such examination, shall be given a preference of five points. The preference shall be added to the grade earned by the person with a disability but only if such person earns a passing grade without preference. For the purposes of this subsection, "person with a disability" means an individual who has a physical or mental impairment that substantially limits one or more major life activities of the individual or who has a record of such an impairment or is regarded as having such an impairment.

C. A person qualified for a preference pursuant to subsections A and B of this section shall be given a ten point preference.

D. A spouse or surviving spouse of any of the following, otherwise qualified pursuant to subsection A of this section, shall be given a five point preference as if the spouse or surviving spouse were an eligible veteran pursuant to subsection A of this section:

1. Any veteran who died of a service-connected disability.
2. Any member of the armed forces who is serving on active duty and who, at the time of application, is listed by the secretary of defense of the United States in any of the following categories for not less than ninety days:
 - (a) Missing in action.
 - (b) Captured in the line of duty by a hostile force.
 - (c) Forcibly detained or interned in the line of duty by a foreign government or power.
3. A person who has a total, permanent disability resulting from a service-connected disability or any person who died while the disability was in existence.

E. An honorably separated veteran who served on active duty in the armed forces at any time and who has a service-connected disability or is receiving compensation or disability retirement benefits under laws administered by the United States department of veterans affairs, army,

navy, air force, coast guard or United States public health service shall be given a ten point preference pursuant to this section.

F. If a person is eligible for a preference pursuant to this section and the person applies for employment with this state or any political subdivision of this state under a merit system of employment as provided by section 38-491 in which applicants are assessed and evaluated but scores are not given, preference shall be given by granting applicable preference codes to qualified applicants.

G. No person eligible for a preference pursuant to this section shall be allowed more than a ten point preference.

H. If a department, division or agency of this state or any political subdivision of this state is operated under a merit system prescribed by the federal government or a department, division or agency of the federal government, the provisions of that system, including preferences, prevail.

38-608. Compensation or time off for legal holidays

A. All public employees who work forty hours or more per week who do not receive either compensation or commensurate time off for legal holidays worked, regardless of the day of the week on which such legal holidays fall, shall receive, for each such holiday worked, one day additional vacation leave or one day additional compensation for each such legal holiday worked.

B. For the purposes of this section, unless the context otherwise requires:

1. "Legal holiday" includes Christmas, Thanksgiving, Labor day, New Year's day and Independence day.
2. "Public employee" includes the employees of the state, a county, city, town or any other political subdivision of the state, but does not include irrigation, power, electrical, agricultural, improvement, drainage and flood control districts, and tax-levying public improvement districts organized pursuant to law.

38-610. Leave of absence for certain federal training: definition

A. The officers and employees of this state, any county, city or town or any agency or political subdivision of this state or a county, city or town shall be granted leaves of absence from their duties without loss of time, pay or efficiency rating:

1. On all days during which they are employed on training duty or to attend camps, maneuvers, formations or drills under orders with any branch or reserve of the armed forces of the United States for a period of not to exceed thirty days in any two consecutive years.

2. On all days during which they are employed on training duty by the national disaster medical system under the United States department of health and human services.

B. The officers and employees of this state, any county, city or town or any agency or political subdivision of this state or a county, city or town shall be granted leaves of absence from their duties on all days during which they are employed on training duty or to attend camps, maneuvers, formations or drills under orders with any auxiliary of the armed forces of the United States for a period of not to exceed thirty days in any two consecutive years. The state, any county, city or town or any agency or political subdivision of this state or a county, city or town may grant the leave of absence without loss of time, pay or efficiency rating.

C. For the purposes of subsection A, paragraph 1 and subsection B of this section, an officer or employee shall not be charged military leave for days on which the individual was not otherwise scheduled for work. The period of time spent in training under orders shall not be deducted from the vacation period with pay to which any officer or employee is otherwise entitled.

D. For the purposes of this section, "year" means the fiscal year of the United States government.

38-611. Compensation of certain state officers and employees

- A. Except as otherwise provided in subsections B and C of this section, any officer or employee of the state, or any of its agencies, is entitled to receive a salary within the range as determined by the department of administration unless modified by the legislature.
- B. Elected state officers, employees of the supreme court, employees of the court of appeals, employees of the legislature, employees of the governor's office, employees of the Arizona state schools for the deaf and the blind except the superintendent and the medical officer and all employees of the Arizona board of regents and the state universities are exempt from the provisions of this section.
- C. Except as otherwise provided by statute or specific legislative appropriation, members of boards, commissions, councils or advisory committees who are authorized by law to receive compensation may receive compensation at the rate of not to exceed thirty dollars for each day engaged in the service of such board, commission, council or advisory committee.

38-610.01. Leave of absence and compensation for officers and employees during active military service

A. If the president of the United States or the governor of this state declares that a state of emergency exists, an officer or employee of this state who is ordered to active military service of the United States or this state as a member of the national guard, air national guard, army reserve, naval reserve, marine corps reserve, air force reserve or coast guard reserve and whose state employment is subject to title 41, chapter 4, article 4 or who is exempt pursuant to section 41-742, subsection D, paragraph 1, 2, 3 or 5 is eligible for an additional leave of absence until released from active duty by competent authority. During the additional leave of absence, the officer or employee shall continue to receive the officer's or employee's salary or compensation, less the amount of all pay and allowances for military activities while on active duty.

B. An officer or employee who receives salary or compensation pursuant to subsection A of this section is not entitled to accrue annual leave or sick leave during the period of active duty. Before qualifying for the compensation pursuant to subsection A of this section, the officer or employee must exhaust all military leave balances by the time of activation or at any time during the active duty period.

C. An officer or employee may receive compensation pursuant to subsection A of this section for the continuous duration of the officer's or employee's order.

D. Within sixty days after an officer or employee who receives pay differential pursuant to this section completes the period of active duty, the officer or employee shall provide proof that the officer or employee rendered honorable service while on active duty during any period for which the officer or employee received the pay differential pursuant to this section. The state may seek recovery of the pay differential from any person who fails to provide proof of honorable service.

E. The director of the department of administration shall establish procedures to be used by an eligible officer or employee to receive compensation pursuant to subsection A of this section.

38-610.02. Leave of absence and compensation for national disaster medical system employment

A. An officer or employee of this state who is called into employment to the national disaster medical system under the United States department of health and human services and whose state employment is subject to title 41, chapter 4, article 4 or who is exempt pursuant to section 41-742, subsection D, paragraph 1, 2, 3 or 5 is eligible for an additional leave of absence until released from active duty by competent authority. During the additional leave of absence, the officer or employee shall continue to receive the officer's or employee's salary or compensation, less the amount of all pay and allowances for activities while on active duty with the national disaster medical system.

B. An officer or employee who receives salary or compensation pursuant to subsection A of this section is not entitled to accrue annual leave or sick leave during the period of active duty.

C. An officer or employee may receive compensation pursuant to subsection A of this section for the continuous duration of the officer's or employee's order.

D. Within sixty days after an officer or employee who receives pay differential pursuant to this section completes the period of active duty, the officer or employee shall provide proof that the officer or employee rendered honorable service while on active duty during any period for which the officer or employee received the pay differential pursuant to this section. This state may seek recovery of the pay differential from any person who fails to provide proof of honorable service.

E. The rights and duties of an officer or employee who is subject to this section is subject to the uniformed services employment and reemployment rights act (38 United States Code chapter 43).

F. The director of the department of administration shall establish procedures to be used by an eligible officer or employee to receive compensation pursuant to subsection A of this section.

41-703. Duties of director

The director shall:

1. Be directly responsible to the governor for the direction, control and operation of the department.
2. Provide assistance to the governor and legislature as requested.
3. Adopt rules the director deems necessary or desirable to further the objectives and programs of the department.
4. Formulate policies, plans and programs to effectuate the missions and purposes of the department.
5. Employ, determine the conditions of employment and prescribe the duties and powers of administrative, professional, technical, secretarial, clerical and other persons as may be necessary in the performance of the department's duties and contract for the services of outside advisors, consultants and aides as may be reasonably necessary.
6. Make contracts and incur obligations within the general scope of the department's activities and operations subject to the availability of monies.
7. Contract with or assist other departments, agencies and institutions of the state, local and federal governments in the furtherance of the department's purposes, objectives and programs.
8. Accept and disburse grants, gifts, donations, matching monies and direct payments from public or private agencies for the conduct of programs that are consistent with the overall purposes and objectives of the department.
9. Establish and maintain separate financial accounts as required by federal law or regulations.
10. Advise and make recommendations to the governor and the legislature on all matters concerning the department's objectives.
11. Delegate the administrative functions, duties and powers as the director deems necessary to carry out the efficient operation of the department.

41-706. State employee living donor leave; definitions

A. An employee is entitled to a leave of absence for the time specified for the following purposes:

1. Five work days to serve as a bone marrow donor for a bone marrow transplant if the employee provides the employee's employer with written verification that the employee is to serve as a bone marrow donor.
2. Thirty work days to serve as an organ donor for a human organ transplant if the employee provides the employee's employer with written verification that the employee is to serve as an organ donor.

B. An employee who is granted a leave of absence pursuant to this section is entitled to receive base pay without interruption during the leave of absence. For the purpose of determining seniority, pay or pay advancement and performance awards and for the receipt of any benefit that may be affected by a leave of absence, the service of the employee is considered uninterrupted by the leave of absence.

C. The employer shall not penalize an employee for requesting or obtaining a leave of absence pursuant to this section.

D. For the purposes of this section:

1. "Bone marrow" means the soft material that fills human bone cavities.
2. "Bone marrow transplant" means the medical procedure by which transfer of bone marrow is made from the body of a person to the body of another person.
3. "Employee" means a person employed in a position in any office, board, commission or department in state government, a person employed by the judiciary or a person employed by a university under the jurisdiction of the Arizona board of regents or a community college district.
4. "Human organ transplant" means the medical procedure by which transfer of an organ or part of an organ is made from the body of a person to the body of another person.
5. "Organ" means human organs or parts of an organ that are capable of being transferred from the body of a person to the body of another person.

41-742. State personnel system; covered and uncovered employees; application; exemptions

A. Beginning September 29, 2012, unless otherwise prescribed in this article:

1. All new hires are at will uncovered employees.
2. Any employee who meets any of the following criteria is an at will uncovered employee:
 - (a) Is employed as an attorney in a position assigned to the attorney salary schedule.
 - (b) A supervisor.
 - (c) Is at a pay grade of nineteen or above or, if a successor compensation system is established, in an equivalent pay range as determined by the director.
 - (d) Is in a position assigned to the information technology salary schedule, in a position assigned to an information technology classification or, if a successor compensation system is established, in an equivalent pay range as determined by the director.
3. Any covered employee who voluntarily accepts a change in assignment to a position in the uncovered service, regardless of whether the voluntary change in assignment is a promotion, demotion or lateral transfer, is an at will uncovered employee on the start date of the voluntary change in assignment.
4. A covered employee may voluntarily elect to become an at will uncovered employee without a change in assignment on approval by the state agency head and the director. If approved, the change from covered to uncovered status is immediate.
5. Once a covered employee becomes an at will uncovered employee, the change is irrevocable.

B. Except as provided in subsection F of this section, the purpose of this article is for all state agencies in the state personnel system to treat employees pursuant to the following principles:

1. Recruiting, selecting and advancing employees on the basis of the employee's relative ability, knowledge and skills after open competition.
2. Providing compensation based on merit, performance, job value and competitiveness within applicable labor markets.
3. Training employees if the training will result in better organizational and individual performance.
4. Retaining employees on the basis of the adequacy of their performance, correct inadequate performance where possible and appropriate and separate employees whose performance is inadequate.
5. Managing applicants and employees in all aspects of personnel administration without regard to political affiliation, race, color, national origin, sex, age, disability or religious creed and with proper regard for their privacy and constitutional rights as citizens.
6. Ensuring that employees are protected against coercion for partisan political purposes and are prohibited from using their official authority for the purpose of interfering with or affecting the result of an election or nomination for office.

C. The director shall establish and administer the state personnel system, including:

1. A classification system and job classes and associated knowledge, skills and abilities for those classes.
2. A centralized job announcement system to streamline statewide recruiting for applicants.

3. A centralized employment system to be used by all successful applicants, including a common application form to be used by all state agencies.
 4. A compensation system, including assigning pay ranges for all job classes and special pay plans for certain classes or groups of employees considering such factors as occupational patterns, economic conditions and pay plans common to government, business and industry.
 5. A statewide training program.
 6. A statewide performance management system.
 7. An audit function to review state agencies' processes and compliance with applicable statutes, personnel rules and policies.
 8. An integrated system to process personnel, payroll and benefits transactions and serve as the system of record for state employees.
- D. This article and articles 5 and 6 do not apply to:
1. An elected state officer. An elected state officer means only elected officials and does not include the employees of elected state officers unless expressly provided.
 2. Members of boards and commissions who are appointed by the legislature or the governor, board members appointed pursuant to section 41-619.52 unless otherwise prescribed by law, employees of the Arizona legislative council, employees appointed or employed by the legislature, any legislative agency or either house of the legislature and employees of the supreme court and the court of appeals.
 3. The Arizona board of regents, officers or employees of state universities and personnel of the Arizona state schools for the deaf and the blind.
 4. Patients or inmates employed in state institutions.
 5. Officers and enlisted personnel of the national guard of Arizona and employees of the department of emergency and military affairs who occupy Arizona national guard positions identified as mobilization assets.
 6. The cotton research and protection council.
 7. The department of public safety.
 8. The Arizona peace officer standards and training board.
- E. Unless otherwise prescribed in this article, subsection A, paragraphs 1, 2 and 3 of this section do not apply to either an initial appointment to or changes in assignment to:
1. An employee of any state agency who is a full authority peace officer as certified by the Arizona peace officer standards and training board.
 2. An employee of the state department of corrections who is employed as a correctional officer I, correctional officer II, correctional officer III, community corrections officer or, if a successor classification system is established, in an equivalent job class as determined by the director.
- F. Subsection B, paragraph 1 of this section, relating to open competition and subsection B, paragraph 4 of this section and subsection B, paragraph 5 of this section, relating to political affiliation, do not apply to:
1. Employees of the governor's office.
 2. Employees of offices of elected officials who either:
 - (a) Report directly to the elected official.

(b) Head a primary component or report directly to the head of a primary component of the office of the elected official.

(c) As a primary duty, determine or publicly advocate substantive program policy for the office of the elected official.

3. The state agency head and each deputy director, or equivalent, of each state agency and employees of the state agency who report directly to either the state agency head or deputy director.

4. Each assistant director, or equivalent, of each state agency and employees in the state agency who report directly to an assistant director.

5. Attorneys in the office of the attorney general.

6. Employees in investment related positions in the state retirement system or plans established by title 38, chapter 5, article 2, 3, 4 or 6.

G. This article and articles 5 and 6 of this chapter do not confer any rights in excess of, or in addition to, those previously authorized to any state employee.

H. This article does not create or confer any contractual employment right for any employee and, unless otherwise provided by law, state agencies are prohibited from executing employment contracts with any state employee.

I. Any communications, including policy manuals, employee handbooks, job offers and performance appraisals and other communications as determined by the director, whether in writing or oral, that conflict with article 1, 5 or 6 of this chapter or this article are void and do not alter or supersede article 1, 5 or 6 of this chapter or this article.

41-743. Powers and duties of the director

- A. The director is responsible for the direction and control of personnel administration.
- B. The director shall:
1. Employ staff as necessary to perform the duties prescribed by this article.
 2. Establish those offices as the director determines necessary to maintain an effective and efficient program of personnel administration.
 3. Adopt rules and procedures relating to personnel and personnel administration for both covered and uncovered employees. The rules shall include:
 - (a) The establishment and maintenance of classification and compensation plans.
 - (b) The recruitment, selection and appointment process of eligible applicants.
 - (c) Leave benefits and administration.
 - (d) Procedures for the periodic and regular review and evaluation of the quality and quantity of work performed by employees.
 - (e) Changes to employment status.
 - (f) Procedures for the review of complaints if the complaint contains an allegation of discrimination or harassment.
 - (g) Procedures requiring review by the director of dismissals, suspensions for more than eighty working hours or involuntary demotions before administering the action.
 - (h) Grievance rights specific to covered employees.
 - (i) Appeal rights and other rules specific to covered employees.
 - (j) Any other aspects of personnel administration as determined by the director.
 4. Provide an annual report and recommendation to the legislature and the joint legislative budget committee as provided in section 41-751.
 5. Establish a mandatory program of personnel management training for all employees with supervisory responsibility that is appropriate to the nature and scope of the employees' responsibilities. The director may waive the mandatory training on a case by case basis. The training shall include at least the following subjects:
 - (a) Basic employee supervision.
 - (b) Employee performance evaluations.
 - (c) Employee discipline.
 - (d) Other subjects as the director determines.
 6. Provide consultation to state agency management in all aspects of personnel management to increase efficiency and economy in state agencies by improving the methods of personnel administration with full recognition of the requirements and needs of management.
- C. The director may:
1. Delegate specific personnel functions to a state agency head consistent with legal requirements.
 2. Enter into agreements with any state agency or political subdivision of this state or any agency of a political subdivision of this state to furnish personnel administration services and facilities of the department. Unless monies have been appropriated by the legislature for this

purpose, any agreement shall provide for reimbursement to this state of the actual cost of the services and facilities furnished, as determined by the department.

3. Subject to legislative appropriation, contract for the services of consultants necessary to perform the annual salary plan and salary plan adjustment recommendations.

D. Subsection B, paragraph 3, subdivision (g) of this section relating to review by the director for certain disciplinary actions does not apply to those employees listed in section 41-742, subsection F.

41-744. Nonconformity with federal regulations granting federal monies

Any provision of this article that conflicts or is inconsistent with federal rules, regulations or standards governing the grant of federal monies to any agency or department of this state does not apply to the agency or department. The director may vary or waive the terms of the rules and procedures as applicable to these agencies and departments to comply with the conditions for federal grants.

41-745. Covered and uncovered service

A. Except as provided in subsection C of this section or section 41-742, subsection A, an employee under covered service is entitled to continue to be a covered employee as long as the employee remains in covered status without a break in service or as otherwise provided by law. Probationary status employees are required to complete their probationary period before obtaining rights of appeal. On successfully completing a probationary period, an employee in covered service is entitled to have appeal rights as provided in article 6 of this chapter or section 41-1830.16, as applicable.

B. Except as provided in subsection C of this section, uncovered service consists of all employees in the state agencies not included in the covered service. Employees in uncovered service are employees at will and are not entitled to appeal rights.

C. A position that requires certification as a full authority peace officer by the Arizona peace officer standards and training board or a position designated as a correctional officer I, correctional officer II, correctional officer III or community corrections officer shall be in the covered and uncovered service as follows:

1. If, on September 29, 2012, the position is filled with an uncovered employee, the position shall remain in the uncovered service for all future appointments to that position.
2. If, on September 29, 2012, the position is filled with a covered employee who was in the state service and the employee does not voluntarily elect to become an at will uncovered employee, the position shall remain in the covered service for the current incumbent and for all future appointments to that position.
3. If, on or after September 29, 2012, an employee in the covered service voluntarily elects to become an at will uncovered employee, the position shall remain in the uncovered service for all future appointments to that position.

41-746. Refusal of consideration for employment; verification of education and work history

A. The director may refuse to consider for employment or remove from consideration for employment any applicant who:

1. Has practiced any deception or fraud in the applicant's application.
2. Has failed to reply within a reasonable time to communications concerning the applicant's availability for employment.
3. Is found to be unsuited or not qualified for employment.
4. Lacks any of the requirements established by the director for the position for which the applicant applies.

B. The director shall develop procedures and standard forms to be used by all state agencies to verify a candidate's education and work history. The procedures shall include a requirement that a state agency head shall make documented, good faith efforts to contact current and previous employers of a candidate to obtain information and recommendations that may be relevant to the candidate's fitness for employment.

41-747. Employment procedures; violation

A. An appointing authority shall comply with the procedures prescribed in this article and the rules adopted by the director for the recruitment, selection, hiring and separation of employees in the state personnel system. The appointing authority shall prescribe the compensation of an employee at all times pursuant to section 38-611.

B. An appointing authority that violates subsection A of this section and incurs an obligation is subject to the civil and criminal penalties prescribed in title 35, chapter 1.

41-748. Transfer of accumulated annual leave; definitions

A. The director shall adopt procedures for the transfer of accumulated annual leave from one employee to another employee in the same state agency and for transfer of accumulated annual leave from one employee to another state employee in another state agency if the employees are members of the same family. The transfers may occur if the employee to whom the leave is transferred has a seriously incapacitating and extended illness or injury or a seriously incapacitating and extended disability that is caused by pregnancy or childbirth or a member of the employee's immediate family has a seriously incapacitating and extended illness or injury or a seriously incapacitating and extended disability that is caused by pregnancy or childbirth and the employee has exhausted all available leave balances. Transferred annual leave shall be increased or reduced proportionally by the difference in the salaries of the employees as determined by department rule. An employee who receives transferred annual leave is limited to using six consecutive months of leave per occurrence unless the employee has applied for long-term disability insurance as provided by rule.

B. For the purposes of this section:

1. "Immediate family" means an employee's parent, spouse, or child, whether natural, adopted, foster or step.
2. "Same family" means an employee's spouse, natural child, adopted child, foster child, stepchild, natural parent, stepparent, adoptive parent, grandparent, grandchild, brother, sister, sister-in-law, brother-in-law, son-in-law, daughter-in-law, mother-in-law, father-in-law, aunt, uncle, nephew or niece.

41-749. Administrative leave; reporting

A. A state agency head shall report to the director if an employee is placed on administrative leave with pay during the investigation of alleged wrongdoing by the employee when the employee's administrative leave totals eighty consecutive hours and, thereafter, shall report to the director on a weekly basis until the administrative leave is terminated.

B. A state agency head shall obtain approval from the director if an employee's administrative leave with pay exceeds thirty working days.

41-754. Required reduction in hours

An agency director may require an agency employee to work reduced hours in order to comply with any reduction in appropriations. The director shall prescribe procedures to implement these reductions.

41-771. Powers and duties of director relating to employees in covered service

The director shall adopt rules and procedures that are applicable only to employees in covered service. The rules and procedures shall provide for:

1. The continuation of a probationary period for probationary employees.
2. A minimum period of original probationary service following the initial appointment of a full authority peace officer as certified by the Arizona peace officers standards and training board or the initial appointment of a correctional officer I, correctional officer II, correctional officer III or community corrections officer. During an original probationary period, the probationary employee shall perform the actual duties of the position and may be discharged without cause. The director shall establish a period of promotional probation service.
3. Disciplinary action to be taken against an employee only if cause exists.
4. Reduction in force by reason of lack of monies or work, abolition of a position or a material change in duties or organization as provided in section 41-772.

41-772. Reduction in force procedure in covered service

- A. The director shall establish reduction in force procedures to be used by all state agencies if reductions are required in covered service by reason of lack of monies or work, abolition of a position, a material change in duty or organization or the introduction of other cost reduction initiatives.
- B. The procedures shall use the person's performance record as the sole basis for determining retention. Consideration of the person's performance is limited to performance, as measured by up to the three most recent performance evaluations conducted using a performance measurement system approved by the director, during a period of not more than the two years immediately preceding the reduction in force. Notwithstanding any other statute, a state agency shall not adopt policies that provide employment retention priority for employees based on tenure or seniority.
- C. The procedures shall provide for a reduction in force to be limited to a single agency or organizational unit of an agency or an organizational unit of agency operations within a geographic area.
- D. The procedures shall provide for an expedited review of any determinations made during a reduction in force.

41-773. Causes for dismissal or discipline for employee in covered service

A. Each of the following constitutes cause for discipline or dismissal of an employee in covered service:

1. Fraud or misrepresentation in securing appointment.
2. Incompetency.
3. Inefficiency.
4. Neglect of duty.
5. Insubordination.
6. Dishonesty.
7. Being impaired by alcohol or drugs while on duty.
8. Illegal use or illegal possession of a narcotic or habit-forming drug.
9. Unauthorized absence or absence without leave.
10. Commission of any crime classified as a felony or involving moral turpitude.
11. Discourteous treatment of the public or other employees.
12. Improper political activity.
13. Wilful disobedience.
14. Misuse or unauthorized use of state property.

B. In addition to the causes prescribed by subsection A of this section, the director may establish other causes deemed necessary.

C. The director shall prescribe definitions for each of the causes for dismissal or discipline prescribed or established under this section that shall be used by covered employees and, as applicable, the state personnel board or the law enforcement merit system council in evaluating dismissals and disciplinary actions.

DEPARTMENT OF INSURANCE

Title 20, Chapter 6, Article 7, Licensing Provisions and Procedures; Article 8, Prohibited Practices, Penalties; Article 10, Long-Term Care Insurance; Article 12, HIV/AIDS: Prohibited and Required Practices; Article 14, Insurance Holding Company; Article 16, Credit for Reinsurance; Article 17, Examinations; Article 22, Military Personnel

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - FIVE-YEAR REVIEW REPORT

MEETING DATE: July 10, 2018

AGENDA ITEM: F-4

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF INSURANCE (F-18-0704)
Title 20, Chapter 6, Article 7, Licensing Provisions and Procedures; Article 8, Prohibited Practices, Penalties; Article 10, Long-Term Care Insurance; Article 12, HIV/AIDS: Prohibited and Required Practices; Article 14, Insurance Holding Company; Article 16, Credit for Reinsurance; Article 17, Examinations; Article 22, Military Personnel

This five-year review report covers 61 rules, 17 appendices, and four exhibits in A.A.C. Title 20, Chapter 6. Article 7 relates to licensing time-frames. Article 8 relates to unfair claim settlement practices. Article 10 contains 26 rules and 10 appendices related to long-term care insurance. Article 12 relates to HIV/AIDS practices for insurers. Article 14 contains 10 rules and seven appendices related to insurance holding companies. Article 16 contains 12 rules and four exhibits related to credit for reinsurance. Article 17 relates to examinations of insurance companies. Article 22 relates to military sales practices. The rules have been amended at various points between 1998 and January 2018.

Proposed Action

The Department intends to complete a series of rulemakings to address issues identified in the report. The Department plans to amend Article 22 by March 2019, Article 8 by August 2019, and Article 7 by April 2020.

1. Has the agency analyzed whether the rules are authorized by statute?

Yes. The Department cites to many statutes as authority for the rules, including A.R.S. § 20-143(A), under which the Director of the Department "may make reasonable rules necessary for effectuating any provision of this title [A.R.S. Title 20, Insurance]."

2. Summary of the agency’s economic impact comparison and identification of stakeholders:

Articles 10, 14, and 16 were promulgated using exempt rulemaking procedures, so there is no EIS for comparison. The Department notes that these rules have minimal economic impact. The Department indicates that Articles 7, 12, 17, and 22 have minimal or nonexistent economic impact. No EIS was available for Article 8, which was originally promulgated in 1982. The Department did not identify any economic impacts created by this rule.

3. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

The Department concludes that any economic impact is generally created by statutes, not rules. These rules are largely procedural, and they establish a legal framework for the insurance industry in Arizona. The Department indicated that the modest benefits of these rules outweigh any minimal costs.

4. Has the agency received any written criticisms of the rules over the last five years?

Yes. The Department indicates that it received a comment from the National Association of Insurance Commissioners related to Section 1408, which was addressed in a rulemaking effective January 2018.

5. Has the agency analyzed the rules’ clarity, conciseness, and understandability, consistency with other rules and statutes, and effectiveness?

Yes. The Department indicates that the rules are generally effective in achieving their objectives. The Department states that the clarity, conciseness, and understandability of Sections 708, 801, 2201, and Table A could be improved. In addition, the Department states that Table A uses the terms “agent” and “broker” which are inconsistent with the term “insurance producer” that is defined in A.R.S. § 20-281(5).

6. Has the agency analyzed the current enforcement status of the rules?

Yes. The Department indicates that the rules are enforced as written.

7. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The Department indicates that the rules are not more stringent than corresponding federal laws, in particular the Military Personnel Financial Services Protection Act.

8. For rules adopted after July 29, 2010, do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

Not applicable. None of the rules reviewed require a permit or license.

9. Conclusion

The Department intends to complete a series of rulemakings to address issues identified in the report. The Department plans to amend Section 2201 by March 2019, Section 801 by August 2019, and Section 708 and Table A by April 2020. The report meets the requirements of A.R.S. § 41-1056 and R1-6-301. Council staff recommends approval of this report.



**Office of the Director
Arizona Department of Insurance**

2910 North 44th Street, Suite 210, Phoenix, Arizona 85018-7269

Phone: (602) 364-3100

Web: <https://insurance.az.gov>

Douglas A. Ducey, Governor
Keith A. Schraad, Interim Director

May 07, 2018

Nicole Ong Colyer, Council Chair
Governor's Regulatory Review Council
100 North 15th Avenue, Suite 305
Phoenix, Arizona 85007

**RE: Arizona Department of Insurance
Five-Year Report on A.A.C. Title 20, Chapter 6, Articles:
7 – Licensing Provisions and Procedures
8 – Prohibited Practices, Penalties
10 – Long-Term Care Insurance
12 – HIV/AIDS: Prohibited and Required Practices
14 – Insurance Holding Company
16 – Credit for Reinsurance
17 – Examinations
and 22 – Military Personnel**

Dear Ms. Colyer:

Under A.R.S. § 41-1056, the Department of Insurance ("Department") submits its Five-Year Report on the above-referenced rules. In accordance with A.A.C. R1-6-301, I have enclosed, in electronic format, one copy of this cover letter and a folder that contains, for each article: the 2013 Five-Year Review Report; the 2018 Five-Year Review Report; a copy of the authorizing statutes required by AAC R1-6-301(D)(2) (both the general and specific authorizing statutes); a copy of the current article required by AAC R20-6-301(D)(1); and, if applicable the most recent Economic, Small Business, and Consumer Impact Statement (EIS).

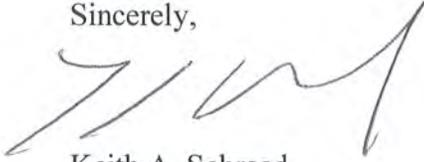
The Department has reviewed all the rules and does not intend to have any of the rules expire for the articles being reviewed in this Five-Year Report under A.R.S. § 41-1056.

This letter shall also serve as confirmation that the Department is in compliance with A.R.S. § 41-1091. The Department files substantive policy statements with the Secretary of State's Office and publishes the substantive policy statements to its website: <https://insurance.az.gov>. This listing also serves as a directory summarizing the subject matter of all currently applicable substantive policy statements. In addition, the website contains a link to the Arizona Administrative Code, Title 20, Chapter 6, which contains a directory and a copy of Department's currently applicable rules.

2018 Five-Year Review Report
May 7, 2018

If you have any questions or need additional information regarding this Five-Year Report, please feel free to contact Mary Kosinski, Regulatory Legal Affairs Officer, at (602) 364-3476.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Schraad', written in a cursive style.

Keith A. Schraad
Interim Director

Enclosures

Governor’s Regulatory Review Council
Five-Year-Review Report
Title 20. Commerce, Financial Institutions, and Insurance
Chapter 6. Department of Insurance
Article 7. Licensing Provisions and Procedures

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. § 20-143(A).

Specific Statutory Authority: A.R.S. § 41-1073(A).

2. The objective of each rule:

Rule	Objective
R20-6-708	Licensing Timeframes. The purpose and objective of this rule is to establish definitions for this Section and set forth the requirements for the administrative completeness and the substantive review time frames and requirements for compliance with those time-frames.
Table A	Licensing Time-frames Table. This table lists licenses issued by the Department and the time-frames for those licenses.

3. Are the rules effective in achieving their objectives?

Yes No

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. Are the rules consistent with other rules and statutes?

Yes No

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation
R20-7-708	Licensing Time-frames. This rule appears to be redundant to many of the Licensing Time Frames laws found at Title 41, Chapter 6, Article 7.1. The Department should only retain the subsections of the rule that are not duplicative.
Table A	Parts of this table are consistent with state statutes. However, parts of Table A inconsistently use the terms “agent” and “broker.” The statutorily defined term that encompasses those entities is “insurance producer,” which is defined in ARS § 20-281(5). As a result, some references to “agent” and “broker” need to be changed to “insurance

	<p>producer.” However, even though the terms “agent” and “broker” are sometimes used, rather than the defined term “insurance producer,” those terms are understood in the industry to mean the same thing.</p> <p>The table also needs to be updated to reflect the types of licenses currently issued by the Department since they have changed since this rule was promulgated.</p>
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5. **Are the rules enforced as written?** Yes X No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency’s proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes No X

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation
R20-6-708	The last sentence in R20-6-708(D)(2) should be revised to read: “The notice of inadequate response shall identify each component or item of information required, to which the applicant did <u>not</u> make some response.” The word “not” should be added for clarification.
Table A	Parts of Table A are not clear and understandable because it contains outdated references to “agent” and “broker” rather than “insurance producer.” Table A also contains some incorrect statutory citations and does not accurately reflect the types of licenses currently being issued by the Department.

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No X

If yes, please fill out the table below:

Commenter	Comment	Agency’s Response

8. **Economic, small business, and consumer impact comparison:**

The Department has not identified any economic impact that is significantly different from that projected in the economic impact statement for the original rulemaking. The last action on this rule occurred in 1999.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes ___ No X

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

The Department had proposed, but did not pursue, to revise the last sentence of R20-6-708(D)(2) to add the word "not" before the phrase "make some response."

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The rule's benefits outweigh, within this State, the costs of the rule and impose the least burden and costs to persons regulated by the rule, including paperwork and other compliance costs necessary to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No X

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department should review the rule, R20-6-708 and eliminate any provisions that are duplicative of the requirements of Title 41 which already apply to the Department. The Department should revise Table A to correct any inconsistent use of terms, incorrect statutory references and to reflect the current license types issued by the Department. No action is planned for the 2018 calendar year.

The Department plans to include this rulemaking in its 2020 Regulatory Agenda and will target an early second quarter date of April, 2020.

Governor's Regulatory Review Council
Five-Year-Review Report
Title 20. Commerce, Financial Institutions, and Insurance
Chapter 6. Department of Insurance
Article 8. Prohibited Practices, Penalties

1. Authorization of the rule by existing statutes

General Statutory Authority: ARS § 20-143.

Specific Statutory Authority: ARS § 20-461(C).

2. The objective of each rule:

Rule	Objective
R20-6-801	Unfair Claim Settlement Practices. The objective of R20-6-801 is to set forth the minimum standards for the investigation and disposition of claims arising under specified policies issued under ARS Title 20. The various provisions of this rule are intended to define procedures and practices that constitute unfair claims practices. This rule is a modified version of a National Association of Insurance Commissioners (NAIC) Model Regulation. This rule has a correlate statute: ARS § 20-461, Unfair Claims Settlement Practices.

3. Are the rules effective in achieving their objectives? Yes X No ___

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. Are the rules consistent with other rules and statutes? Yes X No ___

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. Are the rules enforced as written? Yes X No ___

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency's proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes X No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation
R20-6-801	The rule should be updated where necessary to be consistent with current rulewriting standards.

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No X

If yes, please fill out the table below:

Commenter	Comment	Agency's Response

8. **Economic, small business, and consumer impact comparison:**

The Department has not identified any significant economic impact in the last five-year period. No economic impact statement is available from 1982 when the rule was initially promulgated. However, the impact of the rule is to allow the Department to carry out its mandate regarding investigations and disposition of claims arising out of policies issued under State law. The rule addresses wrong-doing and protects claimants by imposing standards on insurers for fair investigation and disposition of claims.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No X

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

In its 2013 report, the Department proposed to revise R20-6-801 to comply with current rule writing standards. The Department has not prioritized this rulemaking due to a lack of resources to perform rule writing tasks.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The rule's benefits outweigh, within this State, the costs of the rule and impose the least burden and costs to persons regulated by the rule, including paperwork and other compliance costs necessary to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No X

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

Not applicable.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

No action is planned for the 2018 calendar year. The Department plans to include this rulemaking on its 2019 Regulatory Agenda and will target a third quarter date of August, 2019.

Governor’s Regulatory Review Council

Five-Year-Review Report

Title 20. Commerce, Financial Institutions, and Insurance

Chapter 6. Department of Insurance

Article 10. Long-Term Care Insurance

1. Authorization of the rule by existing statutes

General Statutory Authority: ARS § 20-143(A).

Specific Statutory Authority: ARS § 20-1691.02.

2. The objective of each rule:

Rule	Objective
R20-6-1001	Applicability and Scope. The objective of this Section is to define the products and issuers to whom the regulations apply. The correlate statute is ARS § 20-1691.01.
R20-6-1002	Definitions. This Section establishes definitions for terms used in Article 10. The correlate statute to this rule is ARS § 20-1691.
R20-6-1003	Policy Terms. This Section sets forth terms that are prohibited from use in long-term care policies unless the term is specifically defined in the policy and contains the requirements specified in the listed definition for the term.
R20-6-1004	Required Policy Provisions. This Section establishes provisions that must be present in each long-term care policy. This Section also addresses premium increases, electronic enrollment for group policies and minimum standards for home health and community care benefits. The correlate statute is ARS § 20-1691.03.
R20-6-1005	Unintentional Lapse. This Section establishes procedures in the event of an unintentional lapse by the insured and the requirement for a reinstatement provision.
R20-6-1006	Inflation Protection. This Section establishes that an inflation increase option be offered on all long-term care policies except those that are part of life insurance policies. This rule requires that a graphic comparison of the policy benefit levels with and without inflation increase be included with the outline of coverage.
R20-6-1007	Required Disclosure Provisions. This Section establishes required disclosure provisions in long-term care policies including disclosure of tax consequences to the insured.
R20-6-1008	Required Disclosure of Rating Practices to Consumers. This Section establishes the information that an insurer must provide at the time of application, enrollment or delivery of the policy and prescribes the forms to be used. This Section also establishes when an insured must be notified of a premium rate increase.

R20-6-1009	Initial Filing Requirements. This Section defines the requirements for an actuarial certification and actuarial memorandum due at the time an insurer files a policy form.
R20-6-1010	Requirements for Application Forms and Replacement Coverage; Prohibition Against Preexisting Conditions and Probationary Periods in Replacement Policies or Certificates; Reporting Requirements. This Section establishes requirements for application forms and addresses requirements for solicitations, replacement of policies. This Section also prohibits a preexisting exclusion in replacement policies and establishes reporting requirements and rate certification requirements.
R20-6-1011	Prohibition Against Post-claims Underwriting. This Section prohibits post-claims underwriting, establishes the disclosures to be included on application forms and long-term care insurance policies and that a copy of the completed application be delivered to the insured no later than at the time of policy delivery. This rule also establishes that insurers submit a long-term care rescission report to the Department each year.
R20-6-1012	Reserve Standards. This Section establishes reserve standards for long-term care insurance policies and riders.
R20-6-1013	Loss Ratio. This rule establishes loss ratio standards for long-term care insurance policies issued prior to May 10, 2005.
R20-6-1014	Premium Rate Schedule Increases. This Section applies to long-term care policies and certificates issued after May 10, 2005 and before November 10, 2017 (the effective date of the most recent rulemaking). This Section sets requirements for premium rate schedule increases.
R20-6-1015	Premium Rate Schedule Increases for Policies Subject to Loss Ratio Limits Related to Original Filings. This Section applies to long-term policies or certificates issued after November 10, 2017 (the effective date of the most recent rulemaking). This Section sets requirements for premium rate schedule increases. This Section includes a different formula for determining premium rate schedule increases which takes into consideration the accumulated value of historic expected claims.
R20-6-1016	Filing Requirements for Group Policies. This Section establishes form filing requirements for group long-term care policies for out-of-state policies and for associations.
R20-6-1017	Standards for Marketing. This Section establishes long-term care insurance marketing standards and prohibitions.
R20-6-1018	Suitability. This Section contains suitability standards for the purchase of long-term care insurance.

R20-6-1019	Nonforfeiture Benefit Requirement. This Section establishes the requirements an insurer must meet in order to offer a nonforfeiture benefit including contingent benefit upon lapse. The correlate statute is ARS § 20-1691.11.
R20-6-1020	Standards for Benefit Triggers. This Section contains the requirements for benefit triggers.
R20-6-1021	Additional Standards for Benefit Triggers for Qualified Long-term Care Insurance Contracts. This Section contains the requirements for additional benefit triggers for qualified long-term care insurance contracts. Qualified long-term care insurance contracts are defined at ARS § 20-1691(13).
R20-6-1022	Standard Format Outline of Coverage. This Section contains the standard format for the outline of coverage required by ARS § 20-1691.06.
R20-6-1023	Requirement to Deliver Shopper’s Guide. This Section contains the requirement for delivery of a director-approved shopper’s guide to prospective purchasers of long-term care insurance.
R20-6-1024	Availability of New Health Care Services or Providers. This Section requires insurers to notify policyholders of the availability of new long-term care policies that provide coverage for new long-term care services or providers not previously available and the methods for making the new coverage available.
R20-6-1025	Right to Reduce Coverage and Lower Premiums. This Section requires every long-term care insurance policy to include a provision that allows the policyholder to lower premiums by reducing coverage. This Section applies to policies written after November 10, 2017 (the effective date of the most recent rulemaking).
R20-6-1026	Instructions for Appendices. This Section clarifies that information designated as a “Drafting Instruction” is not required to be included as part of a form.
Appendix A	Long-term Care Insurance Personal Worksheet. Required by R20-6-1008 - Required Disclosure of Rating Practices to Consumers, subsection (F) and R20-6-1018 – Suitability, subsection (D).
Appendix B	Long-term Care Insurance Potential Race [sic] Increase Disclosure Form. Required by R20-6-1008 - Required Disclosure of Rating Practices to Consumers, subsection (F).
Appendix C	Notice to Applicant Regarding Replacement of Individual Health or Long-term Care Insurance. Required by R20-6-1010 - Requirements for Application Forms and Replacement Coverage; Prohibition Against Preexisting Conditions and Probationary Periods in Replacement Policies or Certificates; Reporting Requirements, subsections (D) and (E).

Appendix D	Notice to Applicant Regarding Replacement of Health or Long-term Care Insurance. Required by R20-6-1010 - Requirements for Application Forms and Replacement Coverage; Prohibition Against Preexisting Conditions and Probationary Periods in Replacement Policies or Certificates; Reporting Requirements, subsections (D) and (E).
Appendix E	Long-Term Care Insurance Replacement and Lapse Reporting Form. Required by R20-6-1010 - Requirements for Application Forms and Replacement Coverage; Prohibition Against Preexisting Conditions and Probationary Periods in Replacement Policies or Certificates; Reporting Requirements, subsection (I)(2).
Appendix F	Long-term Care Insurance Claims Denial Reporting Form. Required by R20-6-1010 - Requirements for Application Forms and Replacement Coverage; Prohibition Against Preexisting Conditions and Probationary Periods in Replacement Policies or Certificates; Reporting Requirements, subsection (I)(2).
Appendix G	Rescission Reporting Form for Long-term Policies. Required by R20-6-1011 - Prohibition Against Post-claims Underwriting, subsection (E).
Appendix H	Things You Should Know Before You Buy Long-term Care Insurance. Required by R20-6-1018 – Suitability, subsection (I) in addition to Appendix A.
Appendix I	Long-term Care Insurance Suitability Letter. Required by R20-6-1018 – Suitability, subsection (J).
Appendix J	Long-term Care Insurance Outline of Coverage. Referenced by R20-6-1007 - Required Disclosure Provisions, subsection (E) and required by R20-6-1022 - Standard Format Outline of Coverage, subsection (C).

3. **Are the rules effective in achieving their objectives?** Yes X No

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. **Are the rules consistent with other rules and statutes?** Yes X No

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. **Are the rules enforced as written?** Yes X No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency’s proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes X No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No X

If yes, please fill out the table below:

Commenter	Comment	Agency’s Response

8. **Economic, small business, and consumer impact comparison:**

This Article was recently rewritten with the revisions becoming effective on November 10, 2017. The Department adopted the most recent version of the National Association of Insurance Commissioners’ Model Regulation. Because the Legislature exempted the Department from Title 41 for the rulemaking, the Department did not prepare an Economic Impact Statement. This Article does not impact small businesses.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No X

10. **Has the agency completed the course of action indicated in the agency’s previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

The previous report, submitted in 2013, proposed no course of action.

In 2014, the National Association of Insurance Commissioners (“NAIC”) adopted the current version of the Long-Term Care Model Regulation. SB 1441 (L. 2016, Ch. 280); Long-Term Care; Rates; Premiums, enacted into law under an emergency clause effective May 17, 2016, required the Department to adopt rules relating to long-term care insurance that substantially conform to those adopted in model regulations adopted by the NAIC, including the 2014 revisions.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The probable benefits of the rules outweigh, within this state, the probable costs of the rules. The rules impose the least burden and cost to regulated persons including paperwork and other compliance costs to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No ___

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

Not applicable.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

Because the rules were updated in 2017, the Department has no plans to amend this Article in the next five years unless an error is discovered that would require a rulemaking.

rGovernor’s Regulatory Review Council
Five-Year-Review Report
Title 20. Commerce, Financial Institutions, and Insurance
Chapter 6. Department of Insurance
Article 12. HIV/AIDS: Prohibited and Required Practices

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. § 20-143(A)

Specific Statutory Authority: A.R.S. § 20-448.01(J)

2. The objective of each rule:

Rule	Objective
R20-6-1201	Definitions. This rule establishes the definitions used in this Article.
R20-6-1202	Applications for Insurance. This rule establishes the requirements and limitations on questions related to HIV/AIDS in applications for life and health insurance.
R20-6-1203	Testing for HIV; Consent Form. This rule establishes requirements and limitations on an insurer’s ability to test for HIV/AIDS in connection with an application for life or health insurance, including a requirement for written consent.
R20-6-1204	Release of Confidential HIV-related Information; Release Form. This rule establishes the confidentiality requirements for the treatment of HIV-related information.
R20-6-1205	Benefits; Prohibited Practices. This rule establishes that life and health insurance plans shall provide the same benefits for HIV, AIDS, and AIDS-related conditions as they provide for all other diseases.

3. Are the rules effective in achieving their objectives?

Yes **X** No

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. Are the rules consistent with other rules and statutes?

Yes **X** No

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

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5. **Are the rules enforced as written?** Yes X No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency's proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes X No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No X

If yes, please fill out the table below:

Commenter	Comment	Agency's Response

8. **Economic, small business, and consumer impact comparison:**

The Department has not identified any significant economic impact upon insurers, small businesses or consumers as a result of the adoption of these rules in 1994.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No X

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

In the 2013 five-year-review report, the Department did not recommend any course of action for this Article.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The rules' benefits outweigh, within this State, the costs of the rule and impose the least burden and costs to persons regulated by the rule, including paperwork and other compliance costs necessary to achieve the underlying regulatory objective.

The only identified impact has been to the Department's staff time to fulfill its mandate under the rules, including reviewing the confidentiality documents required to be filed with the Department.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No ___

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

Not applicable.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department has no plans to make any changes to this Article at this time.

Governor’s Regulatory Review Council
Five-Year-Review Report
Title 20. Commerce, Financial Institutions, and Insurance
Chapter 6. Department of Insurance
Article 14. Insurance Holding Company

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. § 20-143(A)

Specific Statutory Authority: A.R.S. § 20-481.22

2. The objective of each rule:

Rule	Objective
R20-6-1401	Definitions. This rule establishes definitions applicable to filings that are prescribed by the Holding Company Act (A.R.S. §§ 20-481 through 20-481.32) and Article 14 of the Department’s rules.
R20-6-1402	Acquisition of Control – Statement Filing. This rule and Appendices A and E have the objective of prescribing the contents of a tender offer statement in a uniform format to enable the Director to evaluate acquisition of control applications pursuant to A.R.S. § 20-481.02.
R20-6-1403	Annual Registration of Insurers – Statement Filing. This rule and Appendix B have the objective of prescribing the contents of the registration statement that an insurer that is part of a holding company must file pursuant to A.R.S. § 20-481.09.
R20-6-1404	Summary of Registration – Statement Filing. This rule and Appendix C have the objective of prescribing the contents of the summary of registration statement that an insurer that is part of a holding company must file pursuant to A.R.S. § 20-481.09.
R20-6-1405	Alternative and Consolidated Registration. This rule has the objective of permitting affiliated insurers that are members of a common insurance holding company system to file consolidated registration statements.
R20-6-1406	Disclaimers and Termination of Registration. This rule has the objective of establishing the required contents of a disclaimer of affiliation or control or a termination of registration filing.
R20-6-1407	Transactions Subject to Prior Notices – Notice Filing. This rule and Appendix D have the objective of prescribing the contents of the notice of a proposed transaction between an insurer and an affiliate that must be filed pursuant to A.R.S. § 20-481.12.

R20-6-1408	Enterprise Risk Report. This rule and Appendix F have the objective of prescribing the filing of an enterprise risk report pursuant to A.R.S. § 20-481.10.
R20-6-1409	Extraordinary Dividends and Other Distributions. This rule has the objective of establishing the contents that are required for prior approval requests for payment of extraordinary distributions to shareholders and contents required for disclosure of payment of ordinary distributions to shareholders.
R20-6-1410	Adequacy of Surplus. This rule establishes what additional factors the Director may consider in addition to A.R.S. §§ 20-481.01 and 20-481.24 when determining the adequacy of surplus.
Appendix A	Form A – Statement Regarding the Acquisition of Control of or Merger with a Domestic Insurer. Required by R20-6-1402 – Acquisition of Control – Statement Filing.
Appendix B	Form B – Insurance Holding Company System Annual Registration Statement. Required by R20-6-1403 – Annual Registration of Insurers – Statement Filing.
Appendix C	Form C – Summary of Registration Statement. Required by R20-6-1404.
Appendix D	Form D – Prior Notice of a Transaction. Required by R20-6-1407 – Transactions Subject to Prior Notice – Notice Filing.
Appendix E	Form E – Pre-acquisition Notification Form Regarding the Potential Competitive Impact of a Proposed Merger or Acquisition by a Non-domiciliary Insurer Doing Business in this State or by a Domestic Insurer. Required by R20-6-1402 – Acquisition of Control – Statement Filing.
Appendix F	Form F – Enterprise Risk Report. Required by R20-6-1408 – Enterprise Risk Report.
Appendix G	Instructions on Forms A, B, C, D, E and F.

3. **Are the rules effective in achieving their objectives?** Yes No

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. **Are the rules consistent with other rules and statutes?** Yes No

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. **Are the rules enforced as written?** Yes X No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency’s proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes X No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation

7. **Has the agency received written criticisms of the rules within the last five years?** Yes X No

If yes, please fill out the table below:

Commenter	Comment	Agency’s Response
National Association of Insurance Commissioners	Remove the word “investment” in R20-6-1408(A)(4)(d) to be consistent with A.R.S. § 20-481.19(B).	Word removed in a rulemaking, effective January 16, 2018.

8. **Economic, small business, and consumer impact comparison:**

The Department revised this Article to comply with changes made to the Arizona Holding Company Act (A.R.S. §§ 20-481 through 20-481.30). Effective February 14, 2015, pursuant to Senate Bill 1089 (2014, Chapter 104, Section 20), the Department made major revisions to this Article. Because the Legislature exempted the Department from Title 41 for the rulemaking, the Department did not prepare an Economic Impact Statement. This Article does not impact small businesses.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No X

10. **Has the agency completed the course of action indicated in the agency’s previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

Yes. In 2014, to comply with the National Association of Insurance Commissioners' accreditation standards, the Department passed amendments to Arizona's insurance holding company statutes, A.R.S. §§ 20-481 through 20-481.32.

In 2015, the Department published a Final Exempt Rulemaking to adopt rule changes to reflect the statutory changes enacted the prior year. Unfortunately, the Department failed to remove the word "investment" from R20-6-1408(A)(4)(d) to be consistent with A.R.S. § 20-481.19(B).

In 2017, the Department amended R20-6-1408(A)(4)(d) to remove the word "investment." The amendment to the rule became effective on January 16, 2018.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The rules' benefits outweigh, within this State, the costs of the rule and impose the least burden and costs to persons regulated by the rule, including paperwork and other compliance costs necessary to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No ___

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

Not applicable.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department recommends that the rules remain unchanged at this time.

Governor’s Regulatory Review Council

Five-Year-Review Report

Title 20. Commerce, Financial Institutions, and Insurance

Chapter 6. Department of Insurance

Article 16. Credit for Reinsurance

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. § 20-143

Specific Statutory Authority: A.R.S. § 20-261.08

2. The objective of each rule:

Rule	Objective
R20-6-1601	Credit for Reinsurance – Reinsurer Licensed in Arizona. This rule requires the Director to allow credit for reinsurance when the assuming insurer is licensed in Arizona on any date when the credit is claimed pursuant to A.R.S. § 20-261.05(B).
R20-6-1602	Credit for Reinsurance – Accredited Reinsurers. This rule requires the Director to allow credit for reinsurance when the assuming insurer is accredited by the Director as a reinsurer pursuant to A.R.S. § 20-261.05(C).
R20-6-1603	Credit for Reinsurance – Reinsurer Domiciled in Another State. This rule requires the Director to allow credit for reinsurance when the assuming insurer is domiciled in a state with substantially similar standards pursuant to A.R.S. § 20-261.05(D).
R20-6-1604	Credit for Reinsurance – Reinsurers Maintaining Trust Funds. This rule requires the Director to allow credit for reinsurance when the assuming insurer maintains a trust fund pursuant to A.R.S. § 20-261.05(E).
R20-6-1605	Credit for Reinsurance – Certified Reinsurers. This rule requires the Director to allow credit for reinsurance when the assuming insurer has been certified as a reinsurer pursuant to A.R.S. §§ 20-261.05(F), (G) and (H).
R20-6-1606	Credit for Reinsurance Required by Law. This rule requires the Director to allow credit for reinsurance when the assuming insurer not meeting the requirements of A.R.S. §§ 20-261.05(B) through (H) but only as to certain risks pursuant to A.R.S. § 20-261.05(I).
R20-6-1607	Asset or Reduction from Liability for Reinsurance Ceded to an Unauthorized Assuming Insurer not Meeting the Requirements of Sections R20-6-1601 through R20-6-1606. This rule requires the Director to allow a reduction from liability for reinsurance ceded to an assuming insurer not meeting the requirements of A.R.S. § 20-261.05 pursuant to A.R.S. § 20-261.06.

R20-6-1608	Trust Agreements Qualified under Section R20-6-1607. This rule establishes the required conditions of a trust account of a trust account allowed under Section R20-6-1607.
R20-6-1609	Letter of Credit Qualified under Section R20-6-1607. This rule establishes the requirements for a letter of credit allowed under Section R20-6-1607.
R20-6-1610	Other Security. This rule allows a ceding insurer to take credit for unencumbered funds withheld by the ceding insurer under its exclusive control.
R20-6-1611	Reinsurance Contract. This rule establishes required provisions for a qualifying reinsurance agreement.
R20-6-1612	Contracts Affected. This rule establishes that all new and renewal reinsurance transactions must conform to the requirements of the Article to receive credit.
Exhibit A	Form AR-1, Certificate of Assuming Insurer. Required by Sections R20-6-1602 (Credit for Reinsurance – Accredited Reinsurers), R20-6-1603 (Credit for Reinsurance – Reinsurer Domiciled in Another State) and R20-6-1604 (Credit for Reinsurance – Reinsurer Maintaining Trust Funds).
Exhibit B	Form CR-1, Certificate of Certified Reinsurer. Required by R20-6-1605 (Credit for Reinsurance – Certified Reinsurers).
Exhibit C	Form CR-F Instructions. Required by R20-6-1605 (Credit for Reinsurance – Certified Reinsurers).
Exhibit D	Form CR-S Instructions. Required by R20-6-1605 (Credit for Reinsurance – Certified Reinsurers).

3. **Are the rules effective in achieving their objectives?** Yes X No ___

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. **Are the rules consistent with other rules and statutes?** Yes X No ___

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. **Are the rules enforced as written?** Yes X No ___

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency's proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No

If yes, please fill out the table below:

Commenter	Comment	Agency's Response

8. **Economic, small business, and consumer impact comparison:**

Because this Article was amended in 2015 under a Session Law exempting the Department from the requirements of Title 41 (Laws 2015, Ch. 119, § 3), the Department did not perform an economic, small business and consumer impact comparison. However, this Article does not generally impact small businesses. It only impacts insurers seeking to claim a credit for insurance it cedes to other insurers (reinsures).

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

In the 2013 five-year-review report the Department recommended no changes unless the National Association of Insurance Commissioners (NAIC) adopted new accreditation standards that would require a change to the Article. Subsequent to that submission, the NAIC adopted new accreditation standards which required a change to A.R.S. §§ 20-261.03 and 20-261.05 through 20-261.08. The changes to the statutes required that the Department amend its rules to conform to the revised statutory authority. The Department amended this Article, effective November 30, 2015.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The rules' benefits outweigh, within this State, the costs of the rules and impose the least burden and costs to persons regulated by the rules, including paperwork and other compliance costs necessary to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No ___

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

Not applicable.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department recommends that the rules remain unchanged at this time.

Governor’s Regulatory Review Council
Five-Year-Review Report
Title 20. Commerce, Financial Institutions, and Insurance
Chapter 6. Department of Insurance
Article 17. Examinations

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. § 20-143

Specific Statutory Authority: None

2. The objective of each rule:

Rule	Objective
R20-6-1701	Definitions. This rule establishes definitions for “company,” “examination,” and “examiner” which support the remainder of Article 17.
R20-6-1702	Authority, Scope, and Scheduling of Examinations. This rule establishes who shall examine a company, how often a company shall be examined and under what conditions the Director may accept an examination report prepared by another state in lieu of an examination performed under Article 17.
R20-6-1703	Conduct of Examinations. This rule establishes how examiners are appointed to perform examinations, how examiners are instructed as to the scope of the examination, the Director’s authority to terminate or suspend examinations, and the Director’s authority to disclose the content of examination reports.
R20-6-1704	Examination Reports. This rule establishes the information to be contained in examination reports, time guidelines for an examiner to submit an examination report to the Department, when the company must submit a response to the examination report to the Department, when the Director must review the report, and the Director’s option to either file or reject the report.

3. Are the rules effective in achieving their objectives?

Yes X No ___

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. Are the rules consistent with other rules and statutes?

Yes X No ___

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. **Are the rules enforced as written?** Yes No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency's proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No

If yes, please fill out the table below:

Commenter	Comment	Agency's Response

8. **Economic, small business, and consumer impact comparison:**

These rules are procedural in nature and do not impact the economy. Many of the impacts on insurers are a result of statutory requirements rather than the rules. The economic impact to the insurers and the Department depends on the complexity of the examination and the seriousness of the issues raised by the examination. The Department incurs costs for staff to engage contract examiners to conduct its examinations, to provide continuous oversight and direction to contract examiners during the course of an examination and to review final deliverables provided by the contract examiners such as Draft Reports of Examination, Letters to Management, Management Representation Letters and Summary Review Memorandums. The rules allow the Department to carry out its mandate to examine insurers.

The last action on this Article occurred in 2005 (R20-6-1702).

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

In 2013, the Department recommended that the rules remain unchanged. The Department has not conducted any rulemaking involving this Article since the last 5-year review.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The rules' benefits outweigh, within this State, the costs of the rules and impose the least burden and costs to persons regulated by the rules, including paperwork and other compliance costs necessary to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No ___

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

Not applicable.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department recommends that the rules remain unchanged.

Governor’s Regulatory Review Council
Five-Year-Review Report
Title 20. Commerce, Financial Institutions, and Insurance
Chapter 6. Department of Insurance
Article 22. Military Personnel

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. § 20-143(A)

Specific Statutory Authority: None

2. The objective of each rule:

Rule	Objective
R20-6-2201	Military Sales Practices. This Section incorporates by reference the 2007 National Association of Insurance Commissioners (NAIC) Military Sales Practices Model Regulation (“Model Regulation”) with no future editions or amendments. Congress required that the states, through the NAIC, work with the Secretary of Defense to ensure implementation of appropriate standards to protect members of the Armed Forces from dishonest and predatory insurance sales practices while on military installations. States were then required to report to Congress their progress on adoption of the NAIC standards. Accordingly, the Department adopted the Model Regulation.

3. Are the rules effective in achieving their objectives? Yes X No ___

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. Are the rules consistent with other rules and statutes? Yes X No ___

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. Are the rules enforced as written? Yes X No ___

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency's proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No

If yes, please fill out the table below:

Commenter	Comment	Agency's Response

8. **Economic, small business, and consumer impact comparison:**

The Department has not identified any significant economic impact upon insurers, small businesses or consumers as a result of adoption of this rule in 2008.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

The Department recommended no action be taken in the 5-year Review Report submitted in 2013.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The rule's benefits outweigh, within this State, the costs of the rule and impose the least burden and costs to persons regulated by the rule, including paperwork and other compliance costs necessary to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes No

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

The Military Personnel Financial Services Protection Act, *Pub. L. No. 109-290* (2006).

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

Not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department should make the following minor changes to the rule:

- a. Correct the reference to the Model Regulation from June 2007 to July 2007;
- b. Correct the address of the Department after the Department relocates in June, 2018; and
- c. Correct the address for the NAIC Publications Department.

The Department has no plans to make these changes during calendar year 2018.

The Department plans to include this rulemaking in its 2019 Regulatory Agenda with a first quarter target date of March, 2019.



Within the stated calendar quarter, this Title contains all rules made, amended, repealed, renumbered, and recodified; or rules that have expired or were terminated due to an agency being eliminated under sunset law. These rules were either certified by the Governor's Regulatory Review Council or the Attorney General's Office; or exempt from the rulemaking process, and filed with the Office of the Secretary of State. Refer to the historical notes for more information. Please note that some rules you are about to remove may still be in effect after the publication date of this Supplement. Therefore, all superseded material should be retained in a separate binder and archived for future reference.

TITLE 20. Commerce, Financial Institutions, and Insurance

Chapter 06. Department of Insurance

Sections, Parts, Exhibits, Tables or Appendices modified
R20-6-607 and R20-6-1409

REMOVE Supp. 17-2
Pages: 1 - 134

REPLACE with Supp. 17-4
Pages: 1 - 134

The agency's contact person who can answer questions about rules in this Chapter:

Name: Mary E. Kosinski
Address: Department of Insurance
2910 N. 44th St., Suite 210
Phoenix, AZ 85018
Telephone: (602) 364-3471
E-mail: mkosinski@azinsurance.gov

Disclaimer: Please be advised the person listed is the contact of record as submitted in the rulemaking package for this supplement. The contact and other information may change and is provided as a public courtesy.

PUBLISHER
Arizona Department of State
Office of the Secretary of State, Administrative Rules Division

PREFACE

Under Arizona law, the Department of State, Office of the Secretary of State (Office), accepts state agency rule filings and is the publisher of Arizona rules. The Office of the Secretary of State does not interpret or enforce rules in the Administrative Code. Questions about rules should be directed to the state agency responsible for the promulgation of the rule.

Scott Cancelosi, Director
ADMINISTRATIVE RULES DIVISION
December 31, 2017

RULES

A.R.S. § 41-1001(17) states: “‘Rule’ means an agency statement of general applicability that implements, interprets, or prescribes law or policy, or describes the procedures or practice requirements of an agency.”

THE ADMINISTRATIVE CODE

The Arizona Administrative Code is where the official rules of the state of Arizona are published. The Code is the official codification of rules that govern state agencies, boards, and commissions. Virtually everything in your life is affected in some way by rules published in the Arizona Administrative Code, from the quality of air you breathe to the licensing of your dentist. This chapter is one of more than 230 in the Code compiled in 21 Titles.

ADMINISTRATIVE CODE SUPPLEMENTS

Rules filed by an agency to be published in the Administrative Code are updated quarterly. Supplement release dates are printed on the footers of each chapter:

First Quarter: January 1 - March 31
Second Quarter: April 1 - June 30
Third Quarter: July 1 - September 30
Fourth Quarter: October 1 - December 31

For example, the first supplement for the first quarter of 2017 is cited as Supp. 17-1.

HOW TO USE THE CODE

Rules may be in effect before a supplement is released by the Office. Therefore, the user should refer to issues of the Arizona Administrative Register for recent updates to rule Sections.

ARTICLES AND SECTIONS

Rules in chapters are divided into Articles, then Sections. The “R” stands for “rule” with a sequential numbering and lettering system separated into subsections.

HISTORICAL NOTES AND EFFECTIVE DATES

Historical notes inform the user when the last time a Section was updated in the Administrative Code. Be aware, since the Office publishes each quarter by entire chapters, not all Sections are updated by an agency in a supplement release. Many times just one Section or a few Sections may be updated in the entire chapter.

ARIZONA REVISED STATUTE REFERENCES

The Arizona Revised Statutes (A.R.S.) are available online at the Legislature’s website, www.azleg.gov. An agency’s authority note to make rules is often included at the beginning of a chapter. Other Arizona statutes may be referenced in rule under the A.R.S. acronym.

SESSION LAW REFERENCES

Arizona Session Law references in the introduction of a chapter can be found at the Secretary of State’s website, www.azsos.gov/services/legislative-filings.

EXEMPTIONS FROM THE APA

It is not uncommon for an agency to be exempt from the steps outlined in the rulemaking process as specified in the Arizona Administrative Procedures Act, also known as the APA (Arizona Revised Statutes, Title 41, Chapter 6, Articles 1 through 10). Other agencies may be given an exemption to certain provisions of the Act.

An agency’s exemption is written in law by the Arizona State Legislature or under a referendum or initiative passed into law by Arizona voters.

When an agency files an exempt rulemaking package with our Office it specifies the law exemption in what is called the preamble of rulemaking. The preamble is published in the Arizona Administrative Register online at www.azsos.gov/rules, click on the Administrative Register link.

In the Administrative Code the Office includes editor’s notes at the beginning of a chapter indicating that certain rulemaking Sections were made by exempt rulemaking. Exempt rulemaking notes are also included in the historical note at the end of a rulemaking Section.

The Office makes a distinction to certain exemptions because some rules are made without receiving input from stakeholders or the public. Other exemptions may require an agency to propose exempt rules at a public hearing.

EXEMPTIONS AND PAPER COLOR

If you are researching rules and come across rescinded chapters on a different paper color, this is because the agency filed a Notice of Exempt Rulemaking. At one time the office published exempt rules on either blue or green paper. Blue meant the authority of the exemption was given by the Legislature; green meant the authority was determined by a court order. In 2001 the Office discontinued publishing rules using these paper colors.

PERSONAL USE/COMMERCIAL USE

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Public Services managing rules editor, Rhonda Paschal, assisted with the editing of this chapter.

TITLE 20. COMMERCE, FINANCIAL INSTITUTIONS, AND INSURANCE

CHAPTER 6. DEPARTMENT OF INSURANCE

Authority: A.R.S. § 20-101 et seq.

20 A.A.C. 6, consisting of R20-6-101 through R20-6-159, R20-6-201 through R20-6-218, R20-6-301 through R20-6-308, R20-6-401 through R20-6-409, R20-6-501, R20-6-601 through R20-6-607, R20-6-701 through R20-6-709, R20-6-801 through R20-6-802, R20-6-901, R20-6-1001 through R20-6-1016, R20-6-1101 through R20-6-1120, R20-6-1201 through R20-6-1205, R20-6-1401 through R20-6-1408, R20-6-1601 through R20-6-1607, and R20-6-1701 through R20-6-1704 recodified from 4 A.A.C. 14, consisting of R4-14-101 through R4-14-159, R4-14-201 through R4-14-218, R4-14-301 through R4-14-308, R4-14-401 through R4-14-409, R4-14-501, R4-14-601 through R4-14-607, R4-14-701 through R4-14-709, R4-14-801 through R4-14-802, R4-14-901, R4-14-1001 through R4-14-1016, R4-14-1101 through R4-14-1120, R4-14-1201 through R4-14-1205, R4-14-1401 through R4-14-1408, R4-14-1601 through R4-14-1607, and R4-14-1701 through R4-14-1704, pursuant to R1-1-102 (Supp. 95-1).

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Article 11, consisting of Sections R4-14-1101 through R4-14-1120 and Appendices A through E, adopted again by emergency effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1).

Article 11, consisting of Sections R4-14-1101 through R4-14-1120 and Appendices A through E, adopted by emergency effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). R20-6-1101 through R20-6-1120 recodified from R4-14-1101 through R4-14-1120 (Supp. 95-1).

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Article 14, consisting of Sections R4-14-1401 through R4-14-1408 and Appendices A through E, adopted effective February 22, 1993 (Supp. 93-1). R20-6-1401 through R20-6-1408 recodified from R4-14-1401 through R4-14-1408 (Supp. 95-1).

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ARTICLE 1. HEARING PROCEDURES AND RULEMAKING PETITIONS**R20-6-101. Scope of Article; Definitions**

- A.** Scope. This Article and Title 20 of the Arizona Revised Statutes govern contested cases before the Department. Except as otherwise provided in R20-6-160 for rulemaking petitions, this Article does not apply to rulemaking or investigative proceedings before the Department. Unless expressly applicable by rule or statute, the Arizona Rules of Civil Procedure do not apply to contested cases.
- B.** Definitions. In this Article, the following definitions apply:
1. "Attorney General" means the Attorney General of Arizona, and the Attorney General's assistants or special agents.
 2. "Contested case" means any proceeding in which the legal rights, duties or privileges of a party are required by law to be determined by the Director after an opportunity for hearing.
 3. "Department" means the Arizona Department of Insurance.
 4. "Hearing Officer" means a person appointed by the Director to hear a contested case and make recommendations.
 5. "Party" has the meaning prescribed in A.R.S. § 41-1001(12).
 6. "Person" has the meaning prescribed in A.R.S. § 41-1001(13).
 7. "Director" means the Director of the Department or a hearing officer or any deputy, assistant or examiner of the Director acting in the Director's name in accordance with A.R.S. § 20-150.

Historical Note

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-101 recodified from R4-14-101 (Supp. 95-1). Amended by final rulemaking at 5 A.A.R. 618, effective February 4, 1999 (Supp. 99-1).

R20-6-102. Appearance and Practice before the Director

- A.** Any person may appear in his own behalf or through counsel. An insurer may appear through legal counsel or through a duly authorized officer of the corporation.
- B.** When an attorney other than the Attorney General appears or intends to appear before the Director, he shall promptly advise the Director of his name, address and telephone number and the name and address of the person on whose behalf he intends to appear.
- C.** Conduct at any hearing which, in the discretion of the Director, is deemed contemptuous shall be grounds for exclusion from the hearing. Contemptuous conduct shall include willful noncompliance with an order of the Director or hearing officer, willful disruption or obstruction of any hearing, or any other willful conduct during any hearing which lessens the dignity or authority of the Director or hearing officer.

Historical Note

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-102 recodified from R4-14-102 (Supp. 95-1).

R20-6-103. Filing; Service

- A.** No paper shall be deemed filed until received by the Director.
- B.** Unless otherwise provided by these rules, copies of all papers filed shall, at or before the time of filing, be served on the hearing officer, the Attorney General, and all parties to the proceeding.
- C.** Whenever under these rules service is required or permitted to be made upon a party represented by an attorney, the service shall be made upon the attorney.

- D.** Service upon the attorney, or upon a party, shall be made personally in accordance with Rule 5(c) of the Arizona Rules of Civil Procedure, or by mail by enclosing a copy thereof in a sealed envelope and depositing same, postage prepaid, in the United States mail, addressed to the party to be served or his attorney at the address as shown by the records of the Director. Service by mail is complete upon deposit in the United States Mail.
- E.** All notices of hearing and final decisions issued by the Director shall be served by mail.
- F.** Proof of service shall be made by filing with the Director a written statement that service was made.

Historical Note

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-103 recodified from R4-14-103 (Supp. 95-1).

R20-6-104. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-104 recodified from R4-14-104 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 17 A.A.R. 1421, effective May 31, 2011 (Supp. 11-3).

R20-6-105. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-105 recodified from R4-14-105 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 17 A.A.R. 1421, effective May 31, 2011 (Supp. 11-3).

R20-6-106. Answer to Notice of Hearing

- A.** In any notice of hearing, the Director may require that one or more parties shall file a written answer to the allegations contained in the notice of hearing. Even if not directed to do so, any party may file such an answer.
- B.** Except where a different period is provided by the notice of hearing, a party directed to file a written answer shall do so within 20 days after issuance of the notice of hearing. Where amendments to the assertions contained in the notice of hearing are made subsequent to service of the notice of hearing, one or more of the parties may be required to answer within a reasonable time the amended assertions.
- C.** Unless otherwise directed by the Director, an answer filed under this rule shall briefly state the party's position or defense to the proceeding and shall specifically admit or deny each of the assertions contained in the notice of hearing. If the answering party is without or is unable to reasonably obtain knowledge or information sufficient to form a belief as to the truth of an assertion, he shall so state, which shall have the effect of a denial. Any assertion not denied shall be deemed to be admitted. When answering party intends in good faith to deny only a part of an assertion, he shall specify so much of it as is true and shall deny only the remainder.
- D.** If a party fails to file an answer required by the Director within the time provided, such person shall be deemed in default and the proceeding may be determined against him by the Director and one or more of the assertions contained in the notice of hearing may be deemed to be admitted.
- E.** Any defenses not raised in the answer shall be deemed to be waived.

Historical Note

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-106 recodified from R4-14-106 (Supp. 95-1).

R20-6-107. Expired

Historical Note

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-107 recodified from R4-14-107 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 17 A.A.R. 1421, effective May 31, 2011 (Supp. 11-3).

R20-6-108. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-108 recodified from R4-14-108 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 17 A.A.R. 1421, effective May 31, 2011 (Supp. 11-3).

R20-6-109. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-109 recodified from R4-14-109 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 17 A.A.R. 1421, effective May 31, 2011 (Supp. 11-3).

R20-6-110. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-110 recodified from R4-14-110 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 17 A.A.R. 1421, effective May 31, 2011 (Supp. 11-3).

R20-6-111. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-111 recodified from R4-14-111 (Supp. 95-1). Section expired under A.R.S. § 41-1056(J) at 22 A.A.R. 3374, effective May 31, 2016 (Supp. 16-4).

R20-6-112. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-112 recodified from R4-14-112 (Supp. 95-1). Section expired under A.R.S. § 41-1056(J) at 22 A.A.R. 3374, effective May 31, 2016 (Supp. 16-4).

R20-6-113. Expired**Historical Note**

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-113 recodified from R4-14-113 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 17 A.A.R. 1421, effective May 31, 2011 (Supp. 11-3).

R20-6-114. Request for Rehearing or Review

- A.** Within 30 days after service of the Director's order on the hearing, any aggrieved party may request a rehearing or review of the order. The request shall be in writing and shall be served upon the Director as provided by R20-6-103, and a copy shall be served upon all other parties to the hearing, including the Attorney General if the Attorney General is not the party filing the request.
- B.** A request for rehearing or review shall be based upon one or more of the following grounds which have materially affected the rights of a party:
1. Irregularity in the hearing proceedings, or any order or abuse of discretion whereby the party seeking rehearing or review was deprived of a fair hearing;
 2. Misconduct by the Director, the hearing officer or any party to the hearing;

3. Accident or surprise which could not have been prevented by ordinary prudence;
4. Newly discovered material evidence which could not have been discovered with reasonable diligence and produced at the hearing;
5. Excessive or insufficient sanctions or penalties imposed;
6. Error in the admission or rejection of evidence, or errors of law occurring at the hearing or during the course of the hearing;
7. Bias or prejudice of the Director or hearing officer;
8. That the order, decision, or findings of fact are not justified by the evidence or are contrary to law.

- C.** A request for rehearing or review shall specify which of the grounds listed in subsection (B) it is based upon and shall set forth specific facts and laws in support of the request. A request may cite relevant portions of testimony from the hearing by referring to the pages or lines of the reporter's transcript of the hearing and may cite hearing exhibits by reference to the exhibit number.
- D.** A request for rehearing shall specify the relief sought by the request, such as a different finding of fact, conclusion of law or order. A request for rehearing or review may seek multiple forms of relief in the alternative.
- E.** When a request for rehearing is based upon affidavits, they shall be attached to and filed with the request unless leave for later filing of affidavits is granted by the Director or hearing officer. Leave may be granted ex parte.
- F.** A request for rehearing or review of the Director's order on the hearing which is not timely made is deemed waived for the purpose of judicial review. A party who fails to request rehearing or review of the Director's order on the hearing shall be barred from raising a claim in any proceeding in which the Director, the hearing officer or the Department of Insurance is a party, except as otherwise required by law.
- G.** A party may file a written request for a stay of the Director's decision. An order entered by the Director shall not be stayed by the filing of a stay request or a request for rehearing or review. The Director may stay an order pending the resolution of a request for rehearing or review or when justice requires.

Historical Note

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-114 recodified from R4-14-114 (Supp. 95-1). Amended effective June 15, 1998 (Supp. 98-2).

R20-6-115. Response to Request for Rehearing

- A.** Each party served with a request for rehearing pursuant to R20-6-114 shall be permitted to file a response within 15 days after the request for rehearing has been filed. This response shall be designated as a "response to request for rehearing or review" and shall be in writing. Affidavits may be attached to and filed with the response. If not filed in this manner, an affidavit shall be filed only if leave for later filing of affidavits is granted by the hearing officer or Director. Leave may be granted ex parte. The original response shall be filed with the Department as provided in R20-6-103, and one copy shall be served upon all other parties to the hearing, including the Attorney General if the Attorney General is not the party filing the response.
- B.** The hearing officer or Director has the discretion to convene a hearing or hear oral argument to consider a request for rehearing.

Historical Note

Adopted effective January 23, 1992 (Supp. 92-1). R20-6-115 recodified from R4-14-115 (Supp. 95-1). Amended

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effective June 15, 1998 (Supp. 98-2).

R20-6-116. Reserved
through

R20-6-158. Reserved

R20-6-159. Repealed

Historical Note

Adopted effective February 17, 1977 (Supp. 77-1). R20-6-159 recodified from R4-14-159 (Supp. 95-1). Repealed effective June 15, 1998 (Supp. 98-2).

R20-6-160. Petition for Rulemaking Action

- A.** The following definitions apply in this Section.
1. "Department" means the Arizona Department of Insurance.
 2. "Director" means the Director of the Department of Insurance.
 3. "Petitioner" means a person who petitions the Department for rulemaking action.
 4. "Rulemaking action" means the process for formulation and finalization of a new rule, or amendment or repeal of an existing rule.
- B.** Any person may petition the Department under A.R.S. § 41-1033 for rulemaking action.
- C.** A person who seeks rulemaking action shall file, with the Director, a petition with the following information:
1. The petitioner's name, address, and telephone number;
 2. The name and address of any organization the petitioner represents;
 3. A statement of the rulemaking action the petitioner seeks, including:
 - a. A citation to any existing rule, substantive policy statement, or Department practice to be amended or repealed; and
 - b. The specific language of a proposed new rule or rule amendment;
 4. The reasons for the rulemaking action, including an explanation of why an existing rule, substantive policy statement, or Department practice is inadequate, unreasonable, unduly burdensome, or unlawful; and
 5. The petitioner's dated signature.
- D.** The petitioner may submit additional supporting information, including:
1. Statistical data; and
 2. A list of other persons and entities likely to be affected by the proposed rulemaking action, with an explanation of the likely effects.
- E.** Within 60 days of the date the Department receives the petition, the Department shall send the petitioner a written decision indicating whether the Department is denying the petition or will initiate the requested rulemaking action, with the reasons for the decision.

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 618, effective February 4, 1999 (Supp. 99-1). Section heading corrected at Department Request, Office File No. M11-401, filed October 27, 2011 (Supp. 11-3).

ARTICLE 2. TRANSACTION OF INSURANCE

R20-6-201. Advertisements of Health

- A.** Definitions. The following definitions apply to this Section and to R20-6-201.01, R20-6-201.02, and R20-6-203:
1. "Advertisement" means materials and information used by an insurer to generate insurance business.

- a. Advertisement includes the following information:
 - i. Printed and published material, audio visual material, or other forms of electronic communication that an insurer uses or displays in direct mail, newspapers, magazines, radio, television, billboards, Internet web sites, and similar media to inform the public about the insurer or its products;
 - ii. Descriptive literature and sales aids an insurer issues or releases for presentation to members of the public, including circulars, leaflets, booklets, depictions, illustrations, and form letters;
 - iii. Prepared sales talks and presentations and material for use by an insurer or prepared by an insurer for use by authorized producers; and
 - iv. Material included with a policy when the policy is delivered and material used in the solicitation of renewals and reinstatements;
 - b. "Advertisement" does not include the following:
 - i. Material used solely for training and educating an insurer's employees or producers;
 - ii. Material used in-house by insurers;
 - iii. Communications within an insurer's own organization not intended for dissemination to the public;
 - iv. Individual communications with current policy holders regarding a member's personal information other than material urging the policyholders to increase or expand coverages;
 - v. Correspondence between a prospective group or blanket policyholder and an insurer in the course of negotiating a group or blanket contract;
 - vi. Court-approved material ordered by a court to be disseminated to policyholders;
 - vii. Material in connection with promotion or sponsorship of a charitable event in which only the name of the insurer is displayed;
 - viii. A general announcement from a group or blanket policyholder to eligible individuals on an employment or membership list that a contract or program has been written or arranged. The announcement shall clearly indicate that it is preliminary to the issuance of a booklet and that does not describe the specific benefits under the contract or program nor the advantages as to the purchase of the contract or program;
 - ix. A general announcement by the sponsor that endorses the program;
 - x. Health and wellness material with general health and wellness information; or
 - xi. Press releases and news releases not intended to generate business.
2. "Disability insurance" has the same meaning prescribed in A.R.S. § 20-253.
 3. "Elimination period" means the time between the date a loss occurs and the date that benefits begin to accrue for that loss.
 4. "Exclusion" means a policy term stating a risk that an insurer has not assumed.
 5. "Health insurance" means:
 - a. Disability insurance;
 - b. Insurance provided by a service corporation regulated under A.R.S. § 20-821 et seq.;

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- c. Insurance provided by a prepaid dental plan organization regulated under A.R.S. § 20-1001 et seq.; and
 - d. Insurance provided by a health care services organization regulated under A.R.S. § 20-1051 et seq.
6. "Insurance administrator" or "administrator" has the meaning prescribed in A.R.S. § 20-485(A)(1).
 7. "Insurer" has the same meaning prescribed in A.R.S. § 20-104.
 8. "Limitation" means a policy term, other than an exclusion or reduction, that decreases the risk assumed by the insurer or the insurer's obligation to provide benefits.
 9. "Person" has the meaning in A.R.S. § 20-105.
 10. "Policy" means any plan, certificate, contract, agreement, statement of coverage, evidence of coverage, subscription contract, membership coverage, rider, or endorsement that provides disability benefits, health insurance, medical, surgical or hospital expense benefits, long-term care benefits, or Medicare supplement benefits in the form of a cash indemnity, reimbursement, or service.
 11. "Reduction" means a policy term that reduces the amount of an insured's benefits. A reduction means that the insurer has assumed the risk of a particular loss, but the amount or period of the insurer's coverage is less than what the insurer would have paid for the loss without the reduction.
 12. "Spokesperson" means a person making a testimonial about or an endorsement of an insurer's product who:
 - a. Has a financial interest in the insurer or a related entity as a stockholder, director, officer, employee, or independent contractor;
 - b. Has been formed by the insurer, is owned or controlled by the insurer or its employees, or is a person who owns or controls an insurer;
 - c. Is in a policy-making position and affiliated with the insurer in any capacity described in subsections (a) or (b); or
 - d. Is directly or indirectly compensated for making the testimonial or endorsement.
- B. Scope.**
1. This Section applies to all advertisements for health insurance.
 2. This Section applies to the conduct of insurers, producers, and third-party administrators.
- C. General requirements.** Insurers, producers, and third-party administrators shall ensure that health insurance advertisements meet the requirements of this Section.
1. Advertisements shall be truthful and not misleading. The insurer shall not use words or phrases, the meaning of which is clear only by implication or by familiarity with insurance terminology.
 2. An advertisement shall not omit information or use words, phrases, statements, references, or illustrations if the omission of information or use of words, phrases, statements, references, or illustrations may mislead or deceive purchasers or prospective purchasers.
 3. The words and phrases used to describe a policy shall accurately describe the benefits of the policy and not exaggerate any benefit through the use of phrases such as "all," "full," "complete," "comprehensive," "unlimited," "up to," "as high as," "this policy will pay your hospital and surgical bills" or "this policy will replace your income," or similar words and phrases.
 4. If a policy covers only one disease or a list of specified diseases, any advertisement for the policy shall not imply coverage beyond the specified diseases.
 5. If a policy pays varying amounts for the same loss occurring under different conditions or pays benefits only when a loss occurs under certain conditions, any advertisement for the policy shall disclose the limited conditions.
 6. If an advertisement specifies payment of a particular dollar amount for hospital room and board expenses, the advertisement shall also include the maximum daily benefit and the maximum time limit for which those expenses are covered.
 7. An advertisement that refers to any dollar amount, period of time for which a benefit is payable, cost of policy, or specific policy benefit or the loss for which a benefit is payable shall also disclose any related exclusions, reductions, and limitations without which the advertisement would have the capacity and tendency to mislead or deceive.
 8. An advertisement covered by subsection (C)(7) shall disclose the existence of a waiting period if a policy contains a period between the effective date of the policy and the effective date of coverage under the policy. The advertisement shall disclose the existence of an elimination period.
 9. An advertisement shall disclose any exclusion, reduction, or limitation applicable to a pre-existing condition; however, an insurer is not required to make disclosure in an advertisement that does not reference specific product information, benefit level, or dollar amounts.
 10. If a policy has an exclusion, reduction, or limitation applicable to a preexisting condition, an advertisement shall not state or imply that the applicant's physical condition or medical history will not affect the issuance of the policy or payment of a claim and shall not use the phrase "no medical examination required" or other similar phrase.
 11. If an advertisement refers to renewability, cancellation, or termination of a policy, or states or illustrates time or age in connection with eligibility of applicants or continuation of the policy, the advertisement shall disclose the provisions relating to renewability, cancellation, and termination and any modification of benefits, losses covered, or premiums because of age or for other reasons, in a manner that does not minimize or obscure the qualifying conditions.
 12. An advertisement shall not make any offer prohibited under A.R.S. § 20-452(4).
 13. An advertisement shall not advertise any health insurance policy or form that has not been approved by the Department, unless the policy or form being advertised is exempt from approval or not subject to approval by order or statute.
 14. An advertisement shall not state or imply that a product being offered is an introductory, special, or initial offer that will entitle the applicant to receive advantages not described in the policy by accepting the offer.
 15. An advertisement designed to produce leads either by use of a coupon, a request to write or call the company, or subsequent advertisement before contact, shall disclose that a producer may contact the potential applicant.
- D. Method of disclosure of required information.** If an insurer is required by law to disclose particular information, the information shall be conspicuous and in close proximity to the statements to which the information relates, or under a prominent caption so that the required disclosure is not minimized, obscured, presented in an ambiguous fashion, or intermingled with the content of the advertisement.

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E. Testimonials.

1. Testimonials used in advertisements shall be genuine, represent the current opinion of the author, be applicable to the policy advertised, and be accurately reproduced. The insurer shall provide the Department with the full name of the author and a copy of the full testimonial if the advertisement is filed with the Department or requested by the Department. If an insurer uses a testimonial, the insurer adopts the statements in the testimonial as the insurer's own statements. If a testimonial or endorsement is used more than one year after it is given, the insurer shall obtain a written confirmation from the author that the testimonial represents the current opinion of the author.
2. The insurer shall disclose that a spokesperson has a financial interest or the proprietary or representative capacity of a spokesperson in an advertisement in the introductory portion of a testimonial or endorsement in the same form and with equal prominence as the endorsement. If a spokesperson is directly or indirectly compensated for making a testimonial or endorsement, the insurer shall disclose that fact in the advertisement by language that states, "Paid Endorsement," or words of similar import in type, style, and size at least equal to that used for the spokesperson's name or the body of the testimonial or endorsement, whichever is larger. For television or radio advertising, the insurer shall place the required disclosure prominently in the introductory portion of the advertisement.

F. Statistics. An advertisement with information on the dollar amounts of claims paid, the number of persons insured, or similar statistical information relating to any insurer or policy shall not use facts that are irrelevant to the sale of insurance and shall accurately reflect all of the relevant facts specific to the advertised policy or insurer. An advertisement shall not state or imply that statistics are derived from the policy being advertised unless that is true. The insurer shall identify in the advertisement the source of any statistics used.

G. Inspection of policy. An offer in an advertisement of free inspection of a policy or offer of a premium refund does not cure misleading or deceptive statements in the advertisement.

H. Identification of plan or number of policies.

1. If an advertisement offers a choice in the amount of benefits the advertisement shall disclose that the amount of benefits depends on the policy selected and that the premium will vary with the amount of the benefits.
2. If an advertisement refers to benefits contained in more than one policy, other than a group master policy, the advertisement shall disclose that the benefits are provided only if multiple policies are purchased.

I. Disparaging comparisons and statements. An advertisement shall not make unfair, incomplete, or unsubstantiated comparisons of other insurers' policies or benefits or falsely disparage other insurers' policies, services, or business methods. A comparison is unsubstantiated if the insurer has no empirical study, analysis, or documentation supporting the comparative statement or comparison of policies or benefits.

J. Jurisdictional limits. If an insurer has an advertisement that is meant to be seen or heard beyond the limits of the jurisdiction in which the insurer is licensed, the advertisement shall indicate that the insurer is licensed in a specified state or states only, or is not licensed in a specified state or states, by use of language such as "This Company is licensed only in State A" or "This Company is not licensed in State B."

K. Identity of insurer. The insurer shall state the name of the actual insurer in all of its advertisements. An advertisement

shall clearly identify the insurer and shall not use a trade name, an insurance group designation, name of the parent company of the insurer, name of a particular division of the insurer, service mark, slogan, symbol, or other device that may mislead or deceive the public as to the insurer's identity.

- L. Group insurance.** An advertisement shall not state or imply that prospective policyholders become group or quasi-group members and enjoy special rates or underwriting privileges, unless it is true. An advertisement to join an association, trust, or group that is also an invitation to contract for insurance coverage shall disclose that the applicant will be purchasing both membership in the association, trust, or group and insurance coverage.
- M. Government approval.** An advertisement shall not state or imply any of the following:
1. That a governmental agency or regulator is connected with or has provided or endorsed a policy or endorsed an insurer;
 2. That a governmental agency or regulator has examined an insurer's financial condition and found it satisfactory. This subsection does not apply if an insurer is responding to a specific documented, public, false allegation about its financial condition.
- N. Endorsements.** An advertisement may state that an individual, group, society, association, or other organization has approved or endorsed the insurer or its policy if the organization or group has done so in writing and if any proprietary relationship between the organization and the insurer is disclosed.
- O. Claims handling.** An advertisement shall not contain false statements about the time within which claims are paid or statements that imply that claim settlements will be liberal or generous beyond the terms of the policy.
- P. Statements about the insurer.** An advertisement shall not contain false or misleading statements about an insurer's assets, corporate structure, financial standing, length of time in business, or relative position in the insurance business.

Historical Note

Former General Rule Number 2. R20-6-201 recodified from R4-14-201 (Supp. 95-1). Amended by final rulemaking at 13 A.A.R 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-201.01. Insurer Advertising Responsibility and Records

- A.** An insurer shall establish, and at all times maintain, a system of control over the content, form, and method of dissemination of all advertisements. The insurer whose policies are advertised is responsible for the advertisements, regardless of who writes, creates, designs, or presents the advertisement, except the insurer is not responsible for any advertisement placed by a person to whom the insurer gave no actual or apparent authority. Before using an advertisement about an insurer or its products, a producer shall get written approval from the insurer for use of advertisements that were not supplied by the insurer.
- B.** An insurer shall maintain, at its home or principal office, the following:
1. Advertisements disseminated by the insurer in Arizona or any other state, including:
 - a. Each printed, published, recorded, or prepared advertisement of individual policies; and
 - b. Typical printed, published, recorded, or prepared advertisements of blanket, franchise, and group policies.
 2. A notation attached to each advertisement specifying the manner and extent of distribution and the form number of any policy advertised; and

3. Documentation supporting any testimonials, statistical claims, or comparisons shown in the advertising.
- C. An insurer shall maintain the advertisements, notations, and supporting documentation for at least three years from the date of first dissemination.

Historical Note

New Section made by final rulemaking at 13 A.A.R.
2061, effective August 4, 2007 (Supp. 07-2).

R20-6-201.02. Procedures for Filing Advertising Materials; Transmittal Form

- A. An insurer that is required to file a health insurance advertisement with the Department as specified in A.R.S. §§ 20-826(T), 20-1018, 20-1057(X), 20-1110(E), or 20-1662 shall file the advertisement with a transmittal form prescribed by the Department.
- B. The transmittal form shall include the following information:
 1. Identifying information of the insurer, including name, address, National Association of Insurance Commissioners' identification number, and type of insurer;
 2. A contact person at the insurer with whom the Department can communicate about the advertisement;
 3. Description of the type of advertisement being filed;
 4. Planned use and dissemination of the advertisement, including date of first use, or a statement that the advertisement will not be used any earlier than a specified date;
 5. Description of product being advertised;
 6. Form number and name for the advertised product;
 7. A certification from an officer of the insurer that the advertisement complies with applicable laws; and
 8. The dated signature of the insurer's officer.

Historical Note

New Section made by final rulemaking at 13 A.A.R.
2061, effective August 4, 2007 (Supp. 07-2).

R20-6-202. Advertising, Solicitation, and Transaction of Life Insurance

- A. The definitions in R20-6-201(A) and the following definition apply in this Section:

"Life insurance" means a life insurance contract, including all benefits payable under the policy.
- B. Applicability
 1. This Section applies to:
 - a. All persons subject to regulation under A.R.S. Title 20; and
 - b. Advertising, promotion, solicitation, negotiation, and sale of life insurance policies, regardless of the form of dissemination.
 2. This Section does not apply to group insurance, franchise insurance, or to annuities without life contingencies.
- C. General provisions. A life insurance advertisement shall not mislead the public by:
 1. Omitting information that fairly describes the subject matter as a life insurance policy and the benefits available under the policy;
 2. Placing undue emphasis on facts that, even if true, are not relevant to the sale of life insurance; or
 3. Placing undue emphasis on features of incidental or secondary importance to the life insurance aspects of the policy.
- D. The Department deems the following acts misleading and deceptive:
 1. Using any statement, including phrases such as "investment," "investment plan," "founders plan," "charter plan," "expansion plan," "profit," "profits," or "profit sharing," in a context or under circumstances or condi-

- tions that may mislead a purchaser or prospective purchaser to believe that the insurer is selling something other than a life insurance policy or will provide some benefit not included in the policy, or not available to other persons of the same class and equal expectation of life;
2. Using any phrase as the name or title of a life insurance policy if the phrase does not include the words "life insurance," unless other language in the same document expressly provides that the contract is a life insurance policy;
3. Making any statement relating to the growth or earnings of the life insurance industry or to the tax status of life insurance companies in a context that would reasonably be understood as attempting to interest a prospective applicant in the purchase of shares of stock in the insurance company rather than in the purchase of a life insurance policy;
4. Making any statement that reasonably tends to imply that the insured will enjoy a status common to a stockholder or will acquire a stock ownership interest in the insurance company by purchasing the policy, unless the statement is made with reference to policies of domestic life insurers engaged in a program allowed under A.R.S. § 20-453;
5. Providing a policyholder with a premium receipt book, policy jacket, return envelope, or other printed or electronic material referring to the insurer's "investment department," "insured investment department," or similar terminology in a manner implying that the policy is sold, issued, or serviced by the insurer's investment department;
6. Making any statement that reasonably tends to imply that, by purchasing a policy, the purchaser or prospective purchaser will become a member of a limited group of persons who may receive the payment of dividends, special advantages, benefits, or favored treatment unless the insurance contract specifically provides for the described payment of dividend, special advantages, benefits, or favored treatment;
7. Stating or implying that only a limited number of persons or limited class of persons may buy a particular kind of policy, unless the limitation is related to recognized underwriting practices or specifically stated in the policy or rider;
8. Describing premium payments in language that states the payment is a "deposit," unless:
 - a. The payment establishes a debtor-creditor relationship between the insurance company and the policyholder; or
 - b. The term is used with the word "premium" in a manner as to clearly indicate the true character of the payment;
9. Providing any illustration or projection of future dividends that:
 - a. Is not based on the company's actual scale for payment of current dividends, and
 - b. Does not clearly indicate that the dividends are not guarantees;
10. Using the words "dividends," "cash dividends," "surplus," or similar phrases in a manner that states or implies that the payment of dividends is guaranteed or certain to occur;
11. Stating, without qualification, that a purchaser of a policy will share in a stated percentage or portion of the insurer's earnings;
12. Making any statement that projected dividends under a participating policy will be or can be sufficient at any

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future time to assure the receipt of benefits such as a paid-up policy without further payment of premiums unless the statement also explains:

- a. The benefits or coverage that would be provided at the future time, and
 - b. The conditions under which the receipt of benefits without further payment of premiums would occur;
13. Describing a life insurance policy or premium payments in terms of "units of participation," unless accompanied by other language clearly indicating that the references are to a life insurance policy or to premium payments, as applicable.
 14. Advising producers to avoid disclosing that life insurance is the subject of the solicitation or sale;
 15. Stating that an insured is guaranteed certain benefits if the policy is allowed to lapse, without explaining the non-forfeiture benefits;
 16. Using a dollar amount in printed material to be shown to a prospective policyholder, unless the amount is accompanied by language that:
 - a. States the nature of the dollar amount,
 - b. Prohibits including the use of dollar amounts not related to guaranteed values and properly projected dividend figures, and
 - c. Prohibits the use of figures showing growth of stock values, or other values not a part of the life insurance contract.
 17. Stating that a policy provides features not found in any other insurance policy, unless the insurer can demonstrate that other policies do not have the same feature;
 18. Making any statement or implication about an insurance policy that cannot be verified by reference to the policy contract, a sample of the policy being described, or the company's officially published rate book and dividend illustrations;
 19. Stating that life insurance is "loss proof" or "depression proof," except that an insurer may make statements that life insurance benefits, other than dividends, are guaranteed by the company regardless of economic conditions;
 20. Making any statement that a company makes a profit as a result of policy lapses or surrenders;
 21. Making comparisons to the past experience of other life insurance companies as a means of projecting possible experience for the company issuing the advertising; and
 22. Conduct or statements designed to mislead a prospective applicant or purchaser.

Historical Note

Former General Rule Number 68-14. R20-6-202 recodified from R4-14-202 (Supp. 95-1). Amended by final rulemaking at 13 A.A.R 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-203. Form Filings; Translations

- A. An insurer, rate service organization, or rating organization shall provide to the Department, at the time of filing, an English language translation of each form, advertisement, or other document or material that the insurer is required by statute or rule to file with the Department, if the filed document or material contains communication in a language other than English.
- B. The translation filed under subsection (A) shall compare the foreign language version in a side-by-side format with the English language translation. An insurer, rate service organization, or rating organization shall ensure that the translation is performed by a person with formal college-level or specialized

training in the foreign language, including training in grammar and sentence syntax.

- C. With each translation, an insurer, rate service organization, or rating organization shall also provide to the Department a sworn statement signed by the translator who translated the document that includes the qualifications of the translator under subsection (B) and attests that the translation is identical in substance to the English document or material.
- D. If an insurer, rate service organization, or rating organization files a foreign language version of a document or material that the insurer has previously filed in English, the insurer is not required to refile the English version, but shall identify the English version, provide the side-by-side comparison under subsection (B), and file the sworn statement required under subsection (C).

Historical Note

Former General Rule Number 71-23; Repealed effective January 1, 1981 (Supp. 80-6). R20-6-203 recodified from R4-14-203 (Supp. 95-1). New Section made by final rulemaking at 13 A.A.R 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-204. Expired**Historical Note**

Former General Rule Number 71-24; Former Section R4-14-204 repealed, new Section R4-14-204 adopted effective January 1, 1981 (Supp. 80-6). R20-6-204 recodified from R4-14-204 (Supp. 95-1). Amended effective July 14, 1998 (Supp. 98-3). Amended by final rulemaking at 6 A.A.R. 475, effective January 5, 2000 (Supp. 00-1). Amended by final rulemaking at 13 A.A.R 2061, effective August 4, 2007 (Supp. 07-2). Section expired under A.R.S. § 41-1056(J) at 23 A.A.R. 136, effective December 15, 2016 (Supp. 16-4).

R20-6-205. Local or Regional Retaliatory Tax Information**A. Definitions.**

1. "Addition to the rate of tax" means the tax rate determined under subsection (D) to be applied under A.R.S. 20-230(A) and this Section to foreign or alien insurers domiciled in a foreign country or other state that impose local or regional taxes.
2. "Alien insurer" has the meaning prescribed in A.R.S. § 20-201.
3. "Arizona life insurer" means a domestic insurer authorized to issue life insurance policies in this state within the meaning of A.R.S. § 20-254 or annuities within the meaning of A.R.S. § 20-254.01, regardless of whether the insurer is authorized to transact disability insurance in this state.
4. "Department" means the Arizona Department of Insurance.
5. "Director" has the meaning prescribed in A.R.S. § 20-102.
6. "Domestic insurer" has the meaning prescribed in A.R.S. § 20-203.
7. "Foreign insurer" has the meaning prescribed in A.R.S. § 20-204.
8. "Foreign or alien life insurer" means a foreign or alien insurer authorized to issue life insurance policies in this state within the meaning of A.R.S. § 20-254 or annuities within the meaning of A.R.S. § 20-254.01, regardless of whether the insurer is authorized to transact disability insurance in this state.

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9. "Local or regional taxes" means any tax, license, or other obligation imposed upon domestic insurers or their producers by any:
- City, county, or other political subdivision of a foreign country or other state; or
 - Combination of cities, counties, or other political subdivisions of a foreign country or other state.
10. "Other Arizona insurer" means a domestic insurer authorized to transact one or more lines of insurance in this state but not authorized to transact life insurance or annuities in this state.
11. "Other foreign or alien insurer" means a foreign or alien insurer authorized to transact one or more lines of insurance in this state but not authorized to transact life insurance or annuities in this state.
12. "Other state" means any state in the United States, the District of Columbia, and territories or possessions of the United States, excluding Arizona.
13. "Premium Tax and Fees Report," includes the "Survey of Arizona Domestic Insurers" and the "Retaliatory Taxes and Fees Worksheet," and means the form prescribed by the Director and filed annually by insurers under A.R.S. § 20-224.
- B.** Scope. This Section applies to all foreign, alien, and domestic insurers and to Premium Tax and Fees Reports filed by all insurers.
- C.** Data to be reported by domestic insurers. As a part of its Premium Tax and Fees Report, each domestic insurer shall file a Survey of Arizona Domestic Insurers that reports the following data for the calendar year covered by the insurer's Premium Tax and Fees Report with respect to each foreign country or other state in which the insurer was required to pay any local or regional taxes:
- Total local or regional taxes paid; and
 - Total premiums taxed under the premium taxing statute of the foreign country or other state, as reported by the insurer in any premium tax report filed under the laws of the foreign country or other state.
- D.** Computation of statewide and foreign countrywide additions to the rate of tax. For each foreign country or other state having one or more local or regional taxes on domestic insurers, the Department shall compute on a statewide or foreign countrywide basis an addition to the rate of tax. The Department shall compute the addition to the rate of tax payable by Arizona life insurers separately from the addition to the rate of tax payable by other Arizona insurers. The addition to the rate of tax payable by each category of Arizona domestic insurers shall be the quotient of:
- The aggregate local or regional taxes reported as paid to the foreign country or other state by domestic insurers in each category for the calendar year covered by the Premium Tax and Fees Report divided by,
 - The aggregate statewide or foreign countrywide premiums taxed under the premium taxing statute of the other state or foreign country reported by domestic insurers in each category for the calendar year covered by the Premium Tax and Fees Report.
- E.** Publication of additions to the rate of tax. The Department shall publish additions to the rate of tax determined under A.R.S. § 20-230(A) and this Section, based upon the survey information gathered from domestic insurers for the preceding calendar year under subsection (C). The Department shall publish the information annually on the Department web site, on or before November 1, and in the Retaliatory Taxes and Fees Worksheet for the next year's Premium Tax and Fees Report.
- F.** Foreign and Alien Insurers' Report of the Effect of Local or Regional Taxes. Each foreign or alien insurer domiciled in a foreign country or other state for which the Department publishes an addition to the rate of tax shall include in the "State or Country of Incorporation" column of its Retaliatory Taxes And Fees Worksheet for the calendar year covered by its Premium Tax and Fees Report an amount equal to:
- The total premiums received in Arizona that would be taxed under the laws of the domiciliary jurisdiction, as reported in the "State or Country of Incorporation" column of its premium tax and fees report multiplied by,
 - The applicable addition to the rate of tax published by the Department for the calendar year covered by the insurer's Premium Tax and Fees Report.
- G.** Contesting computation. A foreign or alien insurer subject to this Section may preserve the right to contest the computation of the addition to the rate of tax by submitting a notice of appeal under A.R.S. Title 41, Chapter 6, Article 10 before or at the time the retaliatory tax is paid. Subject to A.R.S. § 20-162, the filing of a notice of appeal to contest the computation of the applicable addition to the rate of tax does not relieve a foreign or alien insurer of the obligation to timely pay the retaliatory tax, and does not stay accrual of any applicable interest and penalties.

Historical Note

Former General Rule Number 71-25; Repealed effective March 19, 1976 (Supp. 76-2). R20-6-205 recodified from R4-14-205 (Supp. 95-1). Section R20-6-205 renumbered from R20-6-206 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-206. Expired**Historical Note**

Former General Rule Number 72-30. Repealed effective February 22, 1993 (Supp. 93-1). R20-6-206 recodified from R4-14-206 (Supp. 95-1). New Section adopted effective December 29, 1995 (Supp. 95-4). Amended effective November 5, 1998 (Supp. 98-4). Former R20-6-206 renumbered to R20-6-205; new R20-6-206 renumbered from R20-6-207 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2). Section expired under A.R.S. § 41-1056(J) at 22 A.A.R. 3374, effective May 31, 2016 (Supp. 16-4).

R20-6-207. Gender Discrimination

- A.** The following definitions apply to this Section:
- "Applicant" means a person who is applying for a policy.
 - "Policy" means an insurance policy, plan, contract, certificate, evidence of coverage, subscription contract, or binder, including a rider or endorsement offered by an insurer.
 - "Insurer" means any company that issues a policy.
- B.** Applicability and scope. This Section applies to any policy or certificate delivered or issued for delivery in this state.
- C.** Availability requirements.
- An insurer shall not deny availability of any insurance policy on the basis of the gender or marital status of the insured or prospective insured.
 - An insurer shall not restrict, modify, exclude, reduce, or limit the amount of benefits payable, or any term, conditions or type of coverage on the basis of an applicant's or insured's gender or marital status, except to the extent the amount of benefits, term, conditions, or type of coverage vary as a result of the application of rate differentials permitted under A.R.S. Title 20.

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3. An insurer may consider marital status to determine whether a person is eligible for dependent coverage or benefits.
- D. Prohibited practices. The following practices and any other practice that treats similarly situated persons differently based on gender unless the different treatment is specifically allowed by law, is prohibited.
 1. Denying coverage to a person of one gender who is self-employed, employed part-time, or employed by relatives, if coverage is offered to a person of the opposite gender who is similarly employed;
 2. Denying a policy rider to a person of one gender if the rider is available to a person of the opposite gender;
 3. Denying maternity benefits to an applicant or insured who buys a policy for individual coverage if the insurer offers comparable family coverage policies with maternity benefits;
 4. Denying, under group policies, dependent coverage to an employee of one gender if dependent coverage is available to an employee of the opposite gender;
 5. Denying a disability income policy to an employed person of one gender if a policy is offered to a person of the opposite gender who is similarly employed;
 6. Treating complications of pregnancy differently from any other illness or sickness covered under a policy;
 7. Restricting, reducing, modifying, or excluding benefits relating to coverage involving the genital organs of only one gender;
 8. Offering lower maximum monthly benefits to a person of one gender than to a person of the opposite gender who is in the same classification under a disability income policy;
 9. Offering more restrictive benefit periods or more restrictive definitions of disability to a person of one gender than to a person of the opposite gender who is in the same classification under a disability income policy;
 10. Establishing different conditions for a policyholder of one gender to exercise benefit options contained in the policy than for a person of the opposite gender;
 11. Limiting the amount of coverage an insured or prospective insured may purchase based upon the insured's or prospective insured's marital status unless the limitation is for the purpose of defining persons eligible for dependent's benefits; and
 12. Otherwise restricting, modifying, excluding or reducing the availability of any insurance contract, the amount of benefits payable, or any term, condition or type of coverage on account of gender or marital status in all lines of insurance.
- b. The coverage is not available to the general public and can be obtained and maintained only because of the covered person's membership in or connection with the particular organization or group;
- c. Coverage is paid for by bulk payment of premiums to the insurer; and
- d. An employer, union, or association sponsors the plan.
2. "Health insurance coverage" means a hospital and medical expense incurred policy, a nonprofit health care service plan contract, a health maintenance organization subscriber contract, or any other health care plan or arrangement that pays for or furnishes medical or health care services whether by insurance or otherwise, but does not include the following:
 - a. Coverage only for accident, or disability income insurance, or any combination of accident and disability income insurance;
 - b. Coverage issued as a supplement to liability insurance;
 - c. Liability insurance, including general liability insurance and automobile liability insurance;
 - d. Workers' compensation or similar insurance;
 - e. Automobile medical payment insurance;
 - f. Credit-only insurance;
 - g. Coverage for onsite medical clinics; and
 - h. Other insurance coverage similar to the coverage specified in subsections (2)(a) through (g), of the Health Insurance Portability and Accountability Act of 1996 (Pub.L.No. 104-191) (HIPAA), under which benefits for medical care are secondary or incidental to other insurance benefits.
 - i. The following benefits, if the benefits are provided under a separate policy, certificate, or contract of insurance or are otherwise not an integral part of the coverage:
 - i. Limited-scope dental or vision benefits;
 - ii. Benefits for long-term care, nursing home care, home health care, community-based care, or any combination of those benefits;
 - iii. Other similar, limited benefits specified in federal regulations issued under HIPAA.
 - j. The following benefits if provided under a separate policy, certificate, or contract of insurance with no coordination between provision of benefits and any exclusion of benefits under a group health plan maintained by the same plan sponsor and if the benefits are paid for an event regardless of whether the benefits are provided under a group health plan maintained by the same plan sponsor:
 - i. Coverage only for a specified disease or illness, or
 - ii. Hospital indemnity or other fixed indemnity insurance.
 - k. The following benefits if the benefits are offered as a separate policy, certificate, or contract of insurance:
 - i. Medicare supplemental policy as defined under § 1882(g)(1) of the Social Security Act, 42 U.S.C. 1395ss;
 - ii. Coverage supplemental to the coverage provided under, 10 U.S.C. Title 10, Chapter 55; or
 - iii. Similar supplemental coverage provided to coverage under a group health plan.
3. "Health status-related factor" means any of the following:
 - a. Health status;

Historical Note

Former General Rule Number 73-32. R20-6-207 recodified from R4-14-207 (Supp. 95-1). Former R20-6-207 renumbered to R20-6-206; new R20-6-207 renumbered from R20-6-209 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-208. Group Coverage Discontinuance and Replacement

- A. Definitions. The following definitions apply in this Section:
 1. "Group insurance" means an insurance benefit that meets all the following conditions:
 - a. Coverage is provided through insurance policies or subscriber contracts to classes of employees or members defined in terms of conditions pertaining to employment or membership;

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- b. Medical condition, including a physical or mental illness;
 - c. Claims experience;
 - d. Receipt of health care;
 - e. Medical history;
 - f. Genetic information;
 - g. Evidence of insurability, including conditions arising out of acts of domestic violence; or
 - h. Disability.
4. "Insurer" means an insurer that offers or provides group health insurance coverage, and includes an insurer that issues disability insurance as defined in A.R.S. § 20-253, a medical, dental, or optometric service corporation as defined in A.R.S. § 20-822, and a health care services organization as defined in A.R.S. § 20-1051.
- B.** This Section applies to all group insurance issued by an insurer.
- C.** Effective date of discontinuance for non-payment of premium.
1. If a group insurance policy provides for automatic discontinuance of the policy after a premium remains unpaid through the grace period allowed for payment, the insurer is liable for valid claims for covered losses incurred before the end of the grace period.
 2. If the insurer's actions after the end of the grace period indicate that the insurer considers the group insurance policy as continuing in force beyond the end of the grace period the insurer is liable for valid claims for losses beginning before the effective date of written notice of discontinuance to the policyholder or other entity responsible for paying premiums.
 - a. The following actions indicate that the insurer considers the policy in force:
 - i. Continued recognition, acknowledgement, or payment of subsequently incurred claims, or
 - ii. Continued enrollment of employees or dependents.
 - b. The following actions shall not indicate that the insurer considers that policy in force:
 - i. Recognition, payment, or acknowledgement of a claim by an insurer or processing a denial based on eligibility or other denial reasons set forth in the group benefit plan booklet; or
 - ii. Recognition, payment, or acknowledgement of claims due to the group's failure to notify the insurer that the employee or member is no longer eligible for coverage or the group policy is terminated.
 3. The effective date of discontinuance shall not be before midnight at the end of the third scheduled work day after the date on which the notice of discontinuance is delivered.
- D.** Requirements for notice of discontinuance.
1. An insurer's notice of discontinuance shall include a request to the group policyholder to notify covered employees of the date when the group policy or contract will discontinue and to advise that, unless otherwise provided in the policy or contract, the insurer is not liable for claims for losses incurred after the date of discontinuance. If the plan involves employee contributions, the notice of discontinuance shall also advise that if the policyholder continues to collect employee contributions beyond the date of discontinuance, the policyholder is solely liable for benefits for the period which contributions were collected.
 2. The insurer shall also provide the policyholder with a supply of notice forms that the policyholder can distribute to the covered employees. The notice forms shall explain the discontinuance and the effective date, and advise employees to refer to their certificates or contracts to determine their rights on discontinuance.
- E.** Extension of benefits.
1. A group policy shall provide a reasonable provision for extension of benefits for an employee or dependent who is totally disabled on the date of discontinuance as follows:
 - a. For a group life plan with a disability benefit extension of any type such as a premium waiver extension, extended death benefit in the event of total disability, or payment of income for a specified period during total disability, the discontinuance of the group policy shall not terminate the benefit extension.
 - b. For a group plan providing benefits for loss of time from work or specific indemnity during hospital confinement, discontinuance of the policy during a disability or hospital confinement shall not effect benefits payable for that disability or hospital confinement.
 - c. A hospital or medical expense coverage, other than dental and maternity expense, shall include a reasonable extension of benefits or accrued liability provision. A provision is reasonable if:
 - i. It provides an extension of at least 12 months under "major medical" and "comprehensive medical" type coverage; or
 - ii. Under other types of hospital or medical expense coverage, it provides either an extension of at least 90 days or an accrued liability for expenses incurred during a period of disability or during a period of at least 90 days starting with a specific event that occurred while coverage was in force, such as an accident.
 2. An insurer shall ensure that the policy and group insurance certificates includes a description of the extension of benefits or accrued liability provision.
 3. An insurer shall ensure that benefits payable during a period of extension or accrued liability are subject to the policy's regular benefit limits, such as benefits ceasing at exhaustion of a benefit period or of maximum benefits.
 4. For hospital or medical expense coverage, an insurer may limit benefit payments to payments applicable to the disabling condition only.
- F.** Continuance of coverage in situations involving replacement of one plan by another.
1. When a group policyholder secures replacement coverage with a new insurer, self-insures, or foregoes provision of coverage, the replaced insurer is liable only to the extent of its accrued liabilities and extensions of benefits after the date of discontinuance.
 2. The succeeding insurer shall cover each individual who:
 - a. Was eligible for coverage under the prior plan on the date of discontinuance, and
 - b. Is eligible for coverage according to the succeeding insurer's plan of benefits with respect to a class of individuals eligible for coverage.
 3. For the purpose of successive health insurance coverage under subsection (F)(2), a succeeding insurer's plan of benefits shall:
 - a. Not have any non-confinement rules; and

- b. Provide, as to any actively-at-work rules, that absence from work due to a health status-related factor is treated as being actively-at-work.
- 4. Nothing in subsection (F)(2) prohibits an insurer from performing coordination of benefits.
- 5. A succeeding insurer shall cover each individual not covered under the succeeding insurer's plan of benefits under subsection (F)(2) according to subsections (a) and (b) if the individual was validly covered, including benefit extension, under the prior plan on the date of discontinuance and is a member of a class of individuals eligible for coverage under the succeeding insurer's plan. Any reference in subsection (a) or (b) to an individual who was or was not totally disabled is a reference to the individual's status immediately before the effective date of coverage for the succeeding insurer.
 - a. The minimum level of benefits to be provided by the succeeding insurer shall be the level of benefits of the prior insurer's plan reduced by any benefits payable by the prior plan.
 - b. The succeeding insurer shall provide coverage until at least the earliest of the following dates:
 - i. The date the individual becomes eligible under the succeeding insurer's plan as described in subsection (F)(2);
 - ii. The date the individual's coverage would terminate according to the succeeding insurer's plan provisions applicable to individual termination of coverage such as at termination of employment or ceasing to be eligible dependent; or
 - iii. For an individual who was totally disabled, and covered by a type of coverage for which subsection (E) requires an extension of accrued liability, the end of any period of extension of benefits or accrued liability that is required of the prior insurer under subsection (E), or if the prior insurer's policy is not subject to subsection (E), would have been required of the insurer had its policy been subject to subsection (E) at the time the prior plan was discontinued and replaced by the succeeding insurer's plan;
 - c. For health insurance coverage, if an individual who was totally disabled at the time the prior insurer's plan was discontinued and replaced by the succeeding insurer's plan, and if subsection (E) requires an extension of benefits or accrued liability, the minimum level of benefits to be provided by the succeeding insurer shall be the level of benefits of the prior insurer's plan, reduced by any benefits paid by the prior plan.
 - d. If the succeeding insurer's plan has a preexisting conditions limitation, the level of benefits applicable to preexisting conditions of persons becoming covered by the succeeding insurer's plan according to subsection (F) during the period the limitation applies under the new plan shall be the lesser of:
 - i. The benefits of the new plan determined without application of the preexisting conditions limitation, or
 - ii. The benefits of the prior plan.
 - e. The succeeding insurer, in applying any deductibles, coinsurance amounts applicable to out-of-pocket maximums, or waiting periods, shall give credit for the satisfaction or partial satisfaction of the same or similar provisions under a prior plan providing simi-

lar benefits. For deductibles or coinsurance amounts applicable to out-of-pocket maximums, the credit shall apply for the same or overlapping benefit periods and shall be given for expenses actually incurred and applied against the deductible or coinsurance provisions of the prior plan during the 90 days before the effective date of the succeeding insurer's plan but only to the extent these expenses are recognized under the terms of the succeeding insurer's plan and are subject to similar deductible or coinsurance provisions.

- f. If the succeeding insurer is required under this Section to make a determination about the benefits in the prior plan, the succeeding insurer may ask the prior plan to provide a statement of the benefits available or other pertinent information sufficient to permit the succeeding insurer to verify the benefit determination. For the purposes of this Section, all definitions, conditions, and covered-expense provisions of the prior plan shall govern the benefit determination. The benefit determination is made as if the succeeding insurer had not replaced coverage.

Historical Note

Former General Rule Number 73-34. R20-6-208 recodified from R4-14-208 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 491, effective September 30, 2001 (Supp. 02-1). Section R20-6-208 renumbered from R20-6-210 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-209. Life Insurance Solicitation

A. Scope.

1. This Section applies to any solicitation, negotiation, or procurement of life insurance occurring in Arizona. This Section applies to any issuer of life insurance contracts, including fraternal benefit societies.
2. Unless otherwise specifically included, the Section does not apply to:
 - a. Annuities,
 - b. Credit life insurance,
 - c. Group life insurance,
 - d. Life insurance policies issued in connection with a pension and welfare plan as defined by and subject to the federal Employee Retirement Income Security Act of 1974 (ERISA), 29 U.S.C. 1001 et seq.; or
 - e. Variable life insurance under which the death benefits and cash values vary according to unit values of investments held in a separate account.

B. In this Section, the following apply:

1. "Buyer's Guide" means a document that contains the language in the Appendix to this Section or language approved by the Director.
2. "Cash dividend" means the current illustrated dividend that can be applied toward payment of the gross premium.
3. "Equivalent Level Annual Dividend" is calculated as follows:
 - a. Accumulate the annual cash dividends at 5% interest compounded annually to the end of the 10th and 20th policy years;
 - b. Divide each accumulation in subsection (a) by an interest factor that converts the accumulation into one equivalent level annual amount that, if paid at the beginning of each year, would accrue to the values in subsection (a) over the periods stipulated in

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- subsection (a). If the period is 10 years, the factor is 13.207 and if the period is 20 years, the factor is 34.719.
- c. Divide the results in subsection (b) by the number of thousands of the Equivalent Level Death Benefit to arrive at the "Equivalent Level Annual Dividend."
4. "Equivalent Level Death Benefit" means the amount of benefit of a policy or term life insurance rider calculated as follows:
 - a. Accumulate the guaranteed amount payable upon death, regardless of the cause of death, at the beginning of each policy year for 10 and 20 years at 5% interest compounded annually to the end of the 10th and 20th policy years, respectively.
 - b. Divide each accumulation in subsection (a) by an interest factor that converts the accumulation into one equivalent level annual amount that, if paid at the beginning of each year, would accrue to the value in subsection (a) over the periods stipulated in subsection (a). If the period is 10 years, the factor is 13.207 and if the period is 20 years, the factor is 34.719.
 5. "Generic name" means a short title that is descriptive of the premium and benefit patterns of a policy or a rider.
 6. "Life Insurance Surrender Cost Index" means the cost index that is calculated as follows:
 - a. Determine the guaranteed cash surrender value, if any, available at the end of the 10th and 20th policy years.
 - b. For policies participating in dividends, add the terminal dividend payable upon surrender, if any, to the accumulation of the annual Cash Dividends at 5% interest compounded annually to the end of the period selected and add this sum to the amount determined in subsection (a).
 - c. Divide the result in subsection (b) (subsection (a) for guaranteed-cost policies) by an interest factor that converts into an equivalent level annual amount that, if paid at the beginning of each year, would accrue to the value in subsection (b) or subsection (a) for guaranteed cost policies, over the periods stipulated in subsection (a)). If the period is 10 years, the factor is 13.207 and if the period is 20 years, the factor is 34.719.
 - d. Determine the equivalent level premium by accumulating each annual premium payable for the basic policy or rider at 5% interest compounded annually to the end of the period stipulated in subsection (a) and dividing the result by the respective factors stated in subsection (c). This amount is the annual premium payable for a level premium plan.
 - e. Subtract the result of subsection (c) from subsection (d).
 - f. Divide the result of subsection (e) by the number of thousands of the Equivalent Level Death Benefit to arrive at the Live Insurance Surrender Cost Index.
 7. The Life Insurance Net Payment Cost Index is calculated in the same manner as the comparable Life Insurance Cost Index except that the cash surrender value and any terminal dividend are set at zero.
 8. "Policy Summary" means a written statement describing elements of the policy, including:
 - a. The following prominently placed title: Statement of Policy Cost and Benefit Information.
 - b. The name and address of the insurance producer, or, if no producer is involved, a statement of the procedure to be followed to receive responses to inquiries regarding the Policy Summary.
- c. The full name and home office or administrative office address of the company by which the life insurance policy is to be or has been written.
 - d. The generic name of the basic policy and each rider.
 - e. For the first five policy years and representative policy years thereafter sufficient to clearly illustrate the premium and benefit patterns, including the years for which Life Insurance Cost Indexes are displayed and at least one age from 60 through 65 or maturity, whichever is earlier, the following amounts, where applicable:
 - i. The annual premium for the basic policy;
 - ii. The annual premium for each optional rider;
 - iii. Guaranteed amount payable upon death at the beginning of the policy year regardless of the cause of death except for suicide, or other specifically enumerated exclusions provided by the basic policy and each optional rider, with benefits provided under the basic policy and each rider shown separately;
 - iv. Total guaranteed cash surrender values at the end of the year with values shown separately for the basic policy and each rider;
 - v. Cash dividends payable at the end of the year with values shown separately for the basic policy and each rider. Dividends need not be displayed beyond the twentieth policy year; and
 - vi. Guaranteed endowment amounts payable under the policy that are not included under guaranteed cash surrender values in subsection (iv).
 - f. The effective policy loan annual percentage interest rate, if the policy contains this provision, specifying whether the rate is applied in advance or in arrears. If the policy loan interest rate is variable, the Policy Summary shall include the maximum annual percentage rate.
 - g. Life Insurance Cost Indexes for 10 and 20 years but not beyond the premium-paying period. Separate indexes shall be displayed for the basic policy and for each optional term life insurance rider. The indexes need not be included for optional riders that are limited to benefits such as accidental death benefits, disability waiver of premium, preliminary term life insurance coverage of less than 12 months, and guaranteed insurability benefits, nor for basic policies or optional riders covering more than one life.
 - h. The Equivalent Level Annual Dividend in the case of participating policies and participating optional term life insurance riders, under the same circumstances and for the same durations at which Life Insurance Cost Indexes are displayed.
 - i. If the Policy Summary includes dividends, a statement that dividends are based on the insurer's current dividend scale and are not guaranteed and a statement in close proximity to the Equivalent Level Annual Dividend as follows: "An explanation of the intended use of the Equivalent Level Annual Dividend is included in the Life Insurance Buyer's Guide."
 - j. A statement in close proximity to the Life Insurance Cost Indexes as follows: "An explanation of the intended use of these indexes is provided in the Life Insurance Buyer's Guide."

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- k. The date on which the Policy Summary is prepared. The Policy Summary shall consist of a separate document. All information required to be disclosed shall not be minimized or obscure. Any amounts that remain level for two or more years of the policy may be represented by a single number that clearly indicates the amounts that are applicable for each policy year. Amounts in subsection (8)(e) shall be listed in total, not on a per thousand nor per unit basis. If more than one insured is covered under one policy or rider, guaranteed death benefits shall be displayed separately for each insured or for each class of insured if death benefits do not differ within the class. Zero amounts shall be displayed as zero and shall not be displayed as a blank space.
- C. Disclosure requirements.
1. The insurer shall provide to all prospective purchasers, a Buyer's Guide and a Policy Summary before accepting the applicant's initial premium or premium deposit, unless the policy for which application is made contains an unconditional refund provision of at least 10 days or unless the Policy Summary contains an unconditional refund offer, in which case the Buyer's Guide and Policy Summary shall be delivered with the policy or before delivery of the policy.
 2. The insurer shall provide a Buyer's Guide and a Policy Summary to any prospective purchaser upon request.
 3. If the Equivalent Level Death Benefit of a policy does not exceed \$5,000, the requirement for providing a Policy Summary is satisfied by delivery of a written statement containing the information described in subsections (D)(8)(b), (c), (d), (e)(i) through (e)(iii), (f), (g), (j), and (k).
- D. General rules.
1. Each insurer shall maintain at its home office or principal office for at least three years after its last authorized use a copy of each form the insurer authorized for use.
 2. A producer shall inform a prospective purchaser, before commencing a life insurance sales presentation, that the producer is acting as a life insurance producer and inform the prospective purchaser of the full name of the insurance company that the producer is representing. If an insurance producer is not involved in the sale, the insurer shall inform the prospective purchaser of the insurance company's full name.
 3. An insurer or producer shall not use terms such as financial planner, investment advisor, financial consultant, or financial counseling to imply that the insurance producer is generally engaged in an advisory business in which compensation is unrelated to sales unless that is true.
 4. If an insurer or producer refers to policy dividends, the reference shall include a statement that dividends are not guaranteed.
 5. An insurer shall not use a system or presentation that does not recognize the time value of money through the use of appropriate interest adjustments for comparing the cost of two or more life insurance policies unless the system or presentation is used to demonstrate the cash flow pattern of a policy and the presentation is accompanied by a statement disclosing that the presentation does not recognize that, because of interest, a dollar in the future has less value than a dollar today.
 6. In a presentation of benefits, an insurer shall not display guaranteed and non-guaranteed benefits as a single sum unless they are shown separately and in close proximity.
 7. An insurer shall include with a statement regarding the use of the Life Insurance Cost Indexes an explanation that the indexes are useful only for the comparison of the relative costs of two or more similar policies.
 8. An insurer shall include with a Life Insurance Cost Index that reflects dividends or an Equivalent Level Annual Dividend a statement that it is based on the company's current dividend scale and is not guaranteed.
 9. If an insurer reserves the right to change the premium for a basic policy or rider, the annual premium shall be the maximum annual premium.
- E. An insurer's failure to provide or deliver a Buyer's Guide or a Policy Summary as provided in subsection (C) constitutes an omission that misrepresents the benefits, advantages, conditions, or terms of an insurance policy.
- Appendix. Life Insurance Buyers Guide**
- Life Insurance Buyer's Guide
- The face page of the Buyer's Guide shall read as follows:
- Life Insurance Buyer's Guide
- This guide can show you how to save money when you shop for life insurance. It helps you to:
- Decide how much life insurance you should buy,
 - Decide what kind of life insurance policy you need, and
 - Compare the cost of similar life insurance policies.
- Prepared by the National Association of Insurance Commissioners
- Reprinted by (Company Name)
- (Month and year of printing)
- The Buyer's Guide shall contain the following language at the bottom of page 2:
- The National Association of Insurance Commissioners is an association of state insurance regulatory officials. This association helps the various Insurance Departments to coordinate insurance laws for the benefit of all consumers. You are urged to use this Guide in making a life insurance purchase.
- Buying Life Insurance**
- When you buy life insurance, you want a policy that fits your needs without costing too much. Your first step is to decide how much you need, how much you can afford to pay and the kind of policy you want. Then, find out what various companies charge for that kind of policy. You can find important differences in the cost of life insurance by using the life insurance cost indexes that are described in this guide. A good life insurance producer or company will be able and willing to help you with each of these shopping steps.
- If you are going to make a good choice when you buy life insurance, you need to understand what kinds are available. If one kind does not seem to fit your needs, ask about the other kinds that are described in this guide. If you feel that you need more information than is given here, you may want to check with a life insurance producer or company or books on life insurance in your public library.
- This guide does not endorse any company or policy.
- The remaining text of the buyer's guide shall begin on page 3 as follows:
- Choosing the Amount**
- One way to decide how much life insurance you need is to figure how much cash and income your dependents would need if you were to die. You should think of life insurance as a source of cash needed for

expenses of final illnesses, paying taxes, mortgages or other debts. It can also provide income for your family's living expenses, educational costs and other future expenses. Your new policy should come as close as you can afford to making up the difference between (1) what your dependents would have if you were to die now, and (2) what they would actually need.

Choosing the Right Kind

All life insurance policies agree to pay an amount of money if you die. But all policies are not the same. There are three basic kinds of life insurance.

1. Term insurance
2. Whole life insurance
3. Endowment insurance

Remember, no matter how fancy the policy title or sales presentation might appear, all life insurance policies contain one or more of the three basic kinds. If you are confused about a policy that sounds complicated, ask the producer or company if it combines more than one kind of life insurance. The following is a brief description of the three basic kinds:

Term Insurance

Term insurance is death protection of a "term" of one or more years. Death benefits will be paid only if you die within that term of years. Term insurance generally provides the largest immediate death protection for your premium dollar.

Some term insurance policies are "renewable" for one or more additional terms even if your health has changed. Each time you renew the policy for a new term, premiums will be higher. You should check the premiums at older ages and the length of time the policy can be continued.

Some term insurance policies are also "convertible." This means that before the end of the conversion period, you may trade the term policy for a whole life or endowment insurance policy even if you are not in good health. Premiums for the new policy will be higher than you have been paying for the term insurance.

Whole Life Insurance

Whole life insurance gives death protection for as long as you live. The most common type is called "straight life" or "ordinary life" insurance, for which you pay the same premiums for as long as you live. These premiums can be several times higher than you would pay initially for the same amount of term insurance. But they are smaller than the premiums you would eventually pay if you were to keep renewing a term insurance policy until your later years.

Some whole life policies let you pay premiums for a shorter period such as 20 years, or until age 65. Premiums for these policies are higher than for ordinary life insurance since the premium payments are squeezed into a shorter period.

Although you pay higher premiums, to begin with, for whole life insurance than for term insurance, whole life insurance policies develop "cash values" which you may have if you stop paying premiums. You can generally either take the cash, or use it to buy some continuing insurance protection. Technically speaking, these values are called "nonforfeiture benefits." This refers to benefits you do not lose (or "forfeit") when you stop paying premiums. The amount of these benefits depends on the kind of policy you have, its size, and how long you have owned it.

A policy with cash values may also be used as collateral for a loan. If you borrow from the life insurance company, the rate of interest is shown in your policy. Any money that you owe on a policy loan would be deducted from the benefits if you were to die, or from the cash value if you were to stop paying premiums.

Endowment Insurance

An endowment insurance policy pays a sum or income to you – the policyholder – if you live to a certain age. If you were to die before then, the death benefit would be paid to your beneficiary. Premiums and cash values for endowment insurance are higher than the same amount of whole life insurance. Thus endowment insurance gives you the least amount of death protection for your premium dollar.

Finding a Low Cost Policy

After you have decided which kind of life insurance fits your needs, look for a good buy. Your chances of finding a good buy are better if you use two types of index numbers that have been developed to aid in shopping for life insurance. One is called the "Surrender Cost Index" and the other is the "Net Payment Cost Index." It will be worth your time to try to understand how these indexes are used, but in any event, use them only for comparing the relative costs of similar policies. **LOOK FOR POLICIES WITH LOW COST INDEX NUMBERS.**

What is Cost?

"Cost" is the difference between what you pay and what you get back. If you pay a premium for life insurance and get nothing back, your cost for the death protection is the premium. If you pay a premium and get something back later on, such as a cash value, your cost is smaller than the premium.

The cost of some policies can also be reduced by dividends; these are called "participating" policies. Companies may tell you what their current dividends are, but the size of future dividends is unknown today and cannot be guaranteed. Dividends actually paid are set each year by the company.

Some policies do not pay dividends. These are called "guaranteed cost" or "non participating" policies. Every feature of a guaranteed cost policy is fixed so that you know in advance what your future cost will be.

The premiums and cash values of a participating policy are guaranteed, but the dividends are not. Premiums for participating policies are typically higher than for guaranteed cost policies, but the cost to you may be higher or lower, depending on the dividends actually paid.

What Are Cost Indexes?

In order to compare the cost of policies, you need to look at:

1. Premiums
2. Cash values
3. Dividends

Cost indexes use one or more of these factors to give you a convenient way to compare relative costs of similar policies. When you compare costs, an adjustment must be made to take into account that money is paid and received at different times. It is not enough to just add up the premiums you will pay and subtract the cash values and dividends you expect to get back. These indexes take care of the arithmetic for you. Instead of having to add, subtract, multiply and divide many numbers yourself, you just compare the index numbers which you can get from life insurance producers and companies:

1. Life Insurance Surrender Cost Index. This index is useful if you consider the level of the cash values to be of primary importance to you. It helps you compare costs if at some future point in time, such as 10 or 20 years, you were to surrender the policy and take its cash value.
Life Insurance Net Payment Cost Index. This Index is useful if your main concern is the benefits that are to be paid at your death and if the level of cash values is of secondary importance to you. It helps you compare costs at some future point

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in time, such as 10 or 20 years, if you continue paying premiums on your policy and do not take its cash value.

There is another number called the Equivalent Level Annual Dividend. It shows the part dividends play in determining the cost index of a participating policy. Adding a policy's Equivalent Level Annual Dividend to its cost index allows you to compare total costs of similar policies before deducting dividends. However, if you make any cost comparisons of a participating policy with a non participating policy, remember that the total cost of the participating policy will be reduced by dividends, but the cost of the non participating policy will not change.

How Do I Use Cost Indexes?

The most important thing to remember when using cost indexes is that a policy with a small index number is generally a better buy than a comparable policy with a larger index number. The following rules are also important:

- (1) Cost comparisons should only be made between similar plans of life insurance. Similar plans are those which provide essentially the same basic benefits and require premium payments for approximately the same period of time. The closer policies are to being identical, the more reliable the cost comparison will be.
- (2) Compare index numbers only for the kind of policy, for your age and for the amount you intend to buy. Since no one company offers the lowest cost for all types of insurance at all ages and for all amounts of insurance, it is important that you get the indexes for the actual policy, age and amount which you intend to buy. Just because a "Shopper's Guide" tells you that one company's policy is a good buy for a particular age and amount, you should not assume that all of that company's policies are equally good buys.
- (3) Small differences in index numbers could be offset by other policy features, or differences in the quality of service you may expect from the company or its producer. Therefore, when you find small differences in cost indexes, your choice should be based on something other than cost.
- (4) In any event, you will need other information on which to base your purchase decision. Be sure you can afford the premiums, and that you understand its cash values, dividends and death benefits. You should also make a judgment on how well the life insurance company or producer will provide service in the future, to you as a policyholder.
- (5) These life insurance cost indexes apply to new policies and should not be used to determine whether you should drop a policy you have already owned for awhile, in favor of a new one. If such a replacement is suggested, you should ask for information from the company that issued the old policy before you take action.

Important Things To Remember – A Summary

The first decision you must make when buying a life insurance policy is choosing a policy whose benefits and premiums must closely meet your needs and ability to pay. Next, find a policy which is also a relatively good buy. If you compare Surrender Cost Indexes and Net Payment Cost Indexes of similar competing policies, your chances of finding a relatively good buy will be better than if you do not shop. REMEMBER, LOOK FOR POLICIES WITH LOWER COST INDEX NUMBERS. A good life insurance producer can help you to choose the amount of life insurance and kind of policy you want and will give you cost indexes so that you make cost comparisons of similar policies.

Don't buy life insurance unless you intend to stick with it. A policy which is a good buy when held for 20 years can be very costly if you quit during the early years of the policy. If you surrender such a policy

during the first few years, you may get little or nothing back and much of your premium may have been used for company expenses.

Read your new policy carefully, and ask the producer or company for an explanation of anything you do not understand. Whatever you decide now, it is important to review your life insurance program every few years to keep up with changes in your income and responsibilities.

Historical Note

Adopted effective June 13, 1977 (Supp. 77-3). R20-6-209 recodified from R4-14-209 (Supp. 95-1). Former R20-6-209 renumbered to R20-6-207; new R20-6-209 renumbered from R20-6-211 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-210. Readable and Understandable Policy: Private Passenger Automobile, Homeowner, Personal Line Dwelling, and Mobile Homeowner

- A. Definitions.** The following definitions apply in this Section:
1. "Readable insurance policy" means a policy that can be read and reasonably understood by a person without special knowledge or training.
 2. "Policy" means a contract or agreement for insurance, or an insurance certificate regardless of the name used, and includes all clauses, endorsements, and papers attached or incorporated.
- B. Scope.** This Section applies to private passenger motor vehicle policies, homeowner policies, personal line dwelling policies, for four family units or less, and mobile homeowner policies delivered or issued for delivery in Arizona.
- C. Compliance.**
1. An insurer shall test the readability of its policy by use of the Flesch Readability Formula as set forth in Rudolf Flesch, *The Art of Readable Writing* (1949, as revised 1974).
 2. An insurer shall not use a policy unless the policy has a total readability score of 40 or more on the Flesch scale.
 3. An insurer shall include with each policy form filing required to be filed with the Director a checklist for the line of insurance setting forth the Flesch score.
- D. Readability guidelines.**
1. General organization of text.
 - a. A policy shall be divided into logically arranged sections for ease of locating content.
 - b. Each section shall be self-contained as to provisions relating solely to that section (for example, an exclusion section shall not be mixed with other parts of a policy).
 - c. General policy provisions applying to all or several like coverages shall be located in a common area.
 - d. The policy shall not contain non-essential provisions.
 - e. Defined words and terms shall be placed in a separate section at the beginning of the policy.
 2. Visual aids to readability. The insurer shall ensure that each policy meets the following format requirements:
 - a. Type size shall be at least eight point.
 - b. The font shall be block print rather than script, and legible.
 - c. Captions and headings shall be distinguishable from the general text.
 - d. White space separating coverages, policy sections, and columns shall be sufficient to make a distinct separation.
 - e. Defined words and terms shall be distinguishable from the general text.

3. Language usage. The insurer shall ensure that each policy:
 - a. Is written in everyday, conversational language;
 - b. Uses short, simple sentences and words in common usage;
 - c. Uses an easy-to-read style, personal pronouns, and present tense active verbs.

Historical Note

Adopted effective May 28, 1979 (Supp. 79-1). R20-6-210 recodified from R4-14-210 (Supp. 95-1). Former R20-6-210 renumbered to R20-6-208; new R20-6-210 renumbered from R20-6-212 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-211. Discrimination on the Basis of Blindness or Partial Blindness

- A. Definitions.** The following definitions apply in this Section:
1. "Policy" means a contract or agreement for or effecting insurance, or a certificate of insurance, regardless of the name used, and includes all clauses, riders, endorsements, and attached papers.
 2. "Person" has the same meaning prescribed in A.R.S. § 20-105.
- B. Scope.** This Section applies to all policies delivered or issued for delivery in this state.
- C. Prohibition.** An insurer shall not engage in the following prohibited acts or practices that constitute unfair discrimination between individuals of the same class:
1. Refusal to insure or refusal to continue to insure, or limiting the amount, extent, or kind of coverage available to an individual solely because of blindness or partial blindness; or
 2. Charging an individual a different rate for the same coverage solely because of blindness or partial blindness.
- D.** In this subsection, "refusal to insure" includes denial by an insurer of disability insurance coverage on the grounds that the policy defines "disability" as being presumed if the insured loses eyesight. An insurer may exclude from coverage disabilities consisting solely of blindness or partial blindness if the insured was blind or partially blind when the policy was issued.
- E.** For all other conditions, including the underlying cause of the blindness or partial blindness, a person who is blind or partially blind is subject to the same standards of sound actuarial principles or actual or reasonably anticipated experience as a sighted person.

Historical Note

Adopted effective August 1, 1977 (Supp. 77-4). Amended effective March 27, 1976 (Supp. 78-2). Correction, Historical Note for Supp. 77-4 should read adopted effective January 1, 1979 filed August 1, 1977. Historical Note for Supp. 78-2 should read Appendix amended effective January 1, 1979 filed March 27, 1978 (Supp. 79-5). Editorial correction, (D)(7)(a), title now shown in italics (Supp. 81-1). R20-6-211 recodified from R4-14-211 (Supp. 95-1). Former R20-6-211 renumbered to R20-6-209; new R20-6-211 renumbered from R20-6-213 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-212. Forms for Replacement of Life Insurance Policies and Annuities

An insurer shall use the following forms of the National Association of Insurance Commissioners Model Regulations (and no future

editions or amendments), which are incorporated by reference and available at the Department of Insurance, 2910 N. 44th St., Phoenix, AZ 85018 and the National Association of Insurance Commissioners, Publications Department, 2301 McGee St., Suite 800, Kansas City, MO 64108:

1. For the purpose of meeting the requirements of A.R.S. § 20-1241.03(C): Life Insurance and Annuities Replacement Model Regulation, Appendix A – Important Notice: Replacement of Life Insurance or Annuities, Volume III, pp. 613-11 through 613-12, July 2000.
2. For the purpose of meeting the requirements of A.R.S. § 20-1241.07(A): Life Insurance and Annuities Replacement Model Regulation, Appendix B – Notice Regarding Replacement: Replacing Your Life Insurance Policy or Annuity?, Volume III, pp. 613-13, July 2000.
3. For the purpose of meeting the requirements of A.R.S. § 20-1241.07(B)(2): Life Insurance and Annuities Replacement Model Regulation, Appendix C – Important Notice: Replacement of Life Insurance or Annuities, Volume III, pp. 613-14 through 613-15, 1998.

Historical Note

Adopted effective March 27, 1978 (Supp. 78-2). Editorial correction see subsection (A) citation to A.R.S. (Supp. 78-4). Editorial correction see subsections (B) and (F) citation to A.R.S. (Supp. 78-6). R20-6-212 recodified from R4-14-212 (Supp. 95-1). Former R20-6-212 renumbered to R20-6-210; new R20-6-212 renumbered from R20-6-215 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-212.01. Forms for Buyer's Guide for Annuities

An insurer shall use the following forms of the National Association of Insurance Commissioners Model Regulations (and no future editions or amendments), which are incorporated by reference and available at the Department of Insurance, 2910 N. 44th St., Phoenix, AZ 85018 and the National Association of Insurance Commissioners, Publications Department, 2301 McGee St., Suite 800, Kansas City, MO 64108:

For the purpose of meeting the requirements of A.R.S. § 20-1242.02 regarding a Buyer's Guide: Annuity Disclosure Model Regulation, Appendix - Buyer's Guide to Fixed Deferred Annuities, Volume II, pp. 245-6 through 245-13, 1999, with attached Appendix I - Equity-Indexed Annuities, Volume II, pp. 245-14 through 245-20, 1999.

Historical Note

Section R20-6-212.01 renumbered from R20-6-215.01 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-213. Life and Disability Insurance Policy Language Simplification

- A. Definitions.** The following definitions apply in this Section:
1. "Company" or "insurer" means any life or disability insurance company, benefit insurer, benefit stock insurer, prepaid dental plan organizations, health care service organizations, and all similar type organizations.
 2. "Director" means the Director of Insurance of Arizona.
 3. "Policy" or "policy form" means any policy, contract, plan or agreement of life or disability insurance, including credit life insurance and credit disability insurance, delivered or issued for delivery in the state by any company subject to this rule; and any certificate issued under a group insurance policy delivered or issued for delivery in this state.
- B. Applicability.**

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1. This Section and R20-6-212 apply to all life and disability insurance policies delivered or issued for delivery in this state by any company but do not apply to:
 - a. Any policy that is a security subject to federal jurisdiction;
 - b. Any group policy covering a group of 1,000 or more lives at date of issue, other than a group credit life insurance policy or a group credit disability insurance policy however, this shall not exempt any certificate issued under a group policy delivered or issued for delivery in this state; or
 - c. Any group annuity contract that serves as a funding vehicle for pension, profit-sharing, or deferred compensation plans;
 2. Except as provided in R20-6-210, no other rule of this state setting language simplification standards shall apply to any policy forms.
- C. Minimum policy language simplification standards.**
1. Except as stated in subsection (B), an insurer shall not deliver or issue for delivery a policy form that has not been approved by the Director unless:
 - a. The text achieves a minimum score of 40 on the Flesch reading ease test or an equivalent score on any other comparable test as provided in subsection (3);
 - b. It is printed, except for specification pages, schedules, and tables, in no less than 10 point type, one point leaded;
 - c. The style, arrangement and overall appearance of the policy do not give undue prominence to any portion of the text of the policy or to any endorsements or riders; and
 - d. The policy, if the policy has more than 3,000 words printed on three or fewer pages of text or if the policy has more than three pages regardless of the number of words, contains a table of contents or an index of the principal sections of the policy.
 2. An insurer shall measure a Flesch reading ease test score as follows:
 - a. For policy forms containing 10,000 words or less of text, an insurer shall analyze the entire form. For policy forms containing more than 10,000 words, an insurer may analyze the readability of two, 200-word samples per page instead of the entire form. The insurer shall separate the samples by at least 20 printed lines.
 - b. The insurer shall count the number of words and sentences in the text, then divide the total number of words by the total number of sentences, then multiply that figure by a factor of 1.015.
 - c. The insurer shall count and divide the total number of syllables by the total number of words, then multiply that figure by a factor of 84.6.
 - d. The sum of the figures computed under subsections (b) and (c) subtracted from 206.835 equals the Flesch reading ease score for the policy form.
 - e. For subsections (b), (c), and (d), the insurer shall use the following procedures:
 - i. A contraction, hyphenated word, or numbers and letters, when separated by spaces, shall be counted as one word;
 - ii. A unit of words ending with a period, semicolon, or colon, but excluding headings and captions, shall be counted as a sentence; and
 - iii. A syllable means a unit of spoken language consisting of one or more letters of a word as divided by an accepted dictionary. If the dictionary shows two or more equally acceptable pronunciations of a word, the pronunciation containing fewer syllables may be used.
- f. The term "text" as used in this subsection shall include all printed matter except the following:
 - i. The name and address of the insurer, the name, number or title of the policy, the table of contents or index, captions and subcaptions, specification pages, schedules or tables; and
 - ii. Policy language that is drafted to conform to the requirements of a federal law, regulation, or agency interpretation, policy language required by a collectively bargained agreement, medical terminology, words defined in the policy, and policy language required by law or regulation, if the insurer identifies the language or terminology excepted by this subsection and certifies, in writing, that the language or terminology is entitled to be excepted by this subsection.
 3. Any other reading test may be approved by the Director for use as an alternative to the Flesch reading test if it is comparable in result to the Flesch reading ease test.
 4. Filings subject to this subsection shall be accompanied by a certificate signed by an officer of the insurer stating that the filing meets the minimum reading ease score on the test used or stating that the score is lower than the minimum required but should be approved under subsection (G) of this Section. To confirm the accuracy of any certification, the Director may require the submission of further information to verify the certification in question.
 5. At the option of the insurer, riders, endorsements, applications and other forms made a part of the policy may be scored as separate forms or as part of the policy with which they may be used.
- D.** The Director may authorize a lower score than the Flesch reading ease score required in subsection (C)(1)(a) if a lower score:
1. Provides a more accurate reflection of readability of a policy form;
 2. Is warranted by the nature of a particular policy form or type or class of policy forms; or
 3. Is caused by certain policy language drafted to conform to the requirements of any state statute, rule, or agency interpretation of law.

Historical Note

Adopted effective November 21, 1977 (Supp. 77-6).

Amended effective March 27, 1978 (Supp. 78-2).

Amended subsection (E), deleted subsection (F) and added new subsections (F) and (G) effective December 3, 1986 (Supp. 86-6). R20-6-213 recodified from R4-14-213 (Supp. 95-1). Former R20-6-213 renumbered to R20-6-211; new R20-6-213 renumbered from R20-6-216 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2). Corrected error in R20-6-213(D) that referenced subsection (E)(1)(a), which was relabeled as (C)(1)(a) in Supp. 07-2 (Supp. 08-1).

R20-6-214. Coordination of Benefits**A. Applicability.**

1. This Section applies to all:
 - a. Group disability insurance policies;
 - b. Group subscriber contracts of hospital and medical service corporations and health care services organizations;
 - c. Group disability policies of benefit insurers; and

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- d. Group-type contracts that contain a coordination of benefits provision, are not available to the general public, and can be obtained and maintained only because of the covered person's membership in or connection with a particular organization. Group-type contracts that meet this description are included regardless of whether denominated as "franchise," "blanket," or some other designation.
2. This Section does not apply to:
- Individual or family policies or individual or family subscriber contracts except as provided for in subsection (A)(1);
 - Group or group-type hospital indemnity benefits, written on a non-expense incurred basis, of \$30 per day or less unless characterized as reimbursement-type benefits and designed or administered to give the insured the right to elect indemnity-type benefits, instead of the reimbursement type benefits at the time of claim; or
 - School accident type coverages, written on a blanket, group, or franchise basis.
- B. Definitions.** In this Section, the following definitions apply:
- "Allowable expense" means any necessary, reasonable, and customary item of expense, at least a portion of which is covered under one or more of the plans covering the person for whom claim is made or service provided.
 - When a plan provides benefits in the form of services rather than cash payments, the reasonable cash value of each service rendered is deemed to be both an allowable expense and a benefit paid.
 - A plan that takes Medicare or similar government benefits into consideration when determining the application of its coordination of benefits provision does not expand the definition of an allowable expense.
 - "Claim determination period" means an appropriate period of time such as "calendar year" or "benefit period" as defined in the policy.
 - "Plan," within the coordination of benefits provisions of a group policy or subscriber contract, means the types of coverage that the insurer may consider in determining whether overinsurance exists with respect to a specific claim.
 - "School accident-type coverage" means coverage of grammar school and high school students for accidents only, including athletic injuries, either on a 24-hour basis or "to-and-from school," for which the parent pays the entire premium.
- C. Order-of-benefit determination.**
- When a claim under a plan with a coordination of benefit provision involves another plan that also has a coordination of benefit provision, the insurer shall make the order-of-benefit determination as follows:
 - The plan that covers the person claiming benefits other than as a dependent shall determine benefits before those of the plan that covers the person as a dependent.
 - The plan of a parent whose birthday occurs earlier in a calendar year shall cover a dependent child before the benefits of a plan of a parent whose birthday occurs later in a calendar year. The word "birthday" as used in this subsection refers only to month and day in a calendar year, not the year in which the person was born.
 - If two or more plans cover a person as a dependent child of divorced or separated parents, benefits for the child are determined in the following order:
 - First, the plan of the parent with custody of the child;
 - Then, the plan of the spouse of the parent with custody of the child; and
 - Finally, the plan of the parent not having custody of the child.
 - Notwithstanding subsection (c), if the specific terms of a court decree state that one of the parents is responsible for the health care expenses of the child, and the entity obligated to pay or provide the benefits of the plan of that parent has actual knowledge of those terms, the benefits of that plan are determined first.
2. The benefits of a plan that covers a person as an employee (or as that employee's dependent) are determined before those of a plan that covers that person as a laid off or retired employee (or as that employee's dependent). If the other plan does not have this provision and if, as a result, the plans do not agree on the order of benefits, this subsection does apply.
3. If none of the provisions of subsection (C) determines the order of benefits, the benefits of the plan that covered a claimant longer are determined before those of the plan that covered that person for the shorter time.
4. If one of the plans is issued out of this state and determines the order of benefits based upon the gender of a parent and, as a result, the plans do not agree on the order of benefits, the plan with the gender rule shall determine the order of benefits.
- D. Excess and other nonconforming provisions.** A plan with an order of benefit determination provision that complies with this Section, a complying plan, may coordinate its benefits with a plan that is "excess" or "always secondary" or that uses an order-of-benefit determination provision that is inconsistent with this Section, a noncomplying plan, on the following basis:
- If the complying plan is the primary plan, it shall pay or provide its benefits on a primary basis.
 - If the complying plan is the secondary plan, it shall pay or provide its benefits first, as the secondary plan. The payment shall be the limit of the complying plan's liability, except as provided in subsection (4).
 - If the noncomplying plan does not provide the information needed by the complying plan to determine its benefits within a reasonable time after it is requested to do so, the complying plan shall assume that the benefits of the noncomplying plan are identical to its own, and shall pay benefits accordingly. The complying plan shall adjust any payments it makes based on the assumption whether information becomes available as the actual benefits of the noncomplying plan.
 - If the noncomplying plan pays benefits so that the claimant receives less in benefits than the claimant would have received had the noncomplying plan paid or provided its benefits as the primary plan, the complying plan shall advance to or on behalf of the claimant an amount equal to the difference. The complying plan shall not have a right to reimbursement from the claimant.

Historical Note

Adopted effective October 26, 1979 (Supp. 79-5). R20-6-214 recodified from R4-14-214 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 491, effective September 30, 2001 (Supp. 02-1). Section R20-

6-214 renumbered from R20-6-217 and amended by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-215. Renumbered

Historical Note

Adopted effective September 7, 1981 (Supp. 81-3). Amended subsections (D) thru (H), deleted Agent's Statement and Exhibit D effective March 30, 1983 (Supp. 83-2). R20-6-215 recodified from R4-14-215 (Supp. 95-1). Amended by exempt rulemaking at 9 A.A.R. 5595, effective January 1, 2004 (Supp. 03-4). Former R20-6-215 renumbered to R20-6-212 by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-215.01. Renumbered

Historical Note

New Section made by exempt rulemaking at 9 A.A.R. 5595, effective January 1, 2004 (Supp. 03-4). Former R20-6-215.01 renumbered to R20-6-212.01 by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-216. Renumbered

Historical Note

Adopted effective as set forth in subsection (H) (Supp. 80-6). R20-6-216 recodified from R4-14-216 (Supp. 95-1). Former R20-6-216 renumbered to R20-6-213 by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

R20-6-217. Renumbered

Historical Note

Adopted effective September 14, 1982 (Supp. 82-3). Amended subsections (C) and (D), deleted (F) effective January 1, 1987, filed December 16, 1986 (Supp. 86-6). R20-6-217 recodified from R4-14-217 (Supp. 95-1). Former R20-6-217 renumbered to R20-6-214 by final rulemaking at 13 A.A.R. 2061, effective August 4, 2007 (Supp. 07-2).

Editor's Note: The following Section expired under A.R.S. § 41-1056(E) on September 30, 2001 at 8 A.A.R. 491. The Notice of Rule Expiration was not received until January 9, 2002. Therefore, the repeal of the rule noted in the Historical Note is moot (Supp. 02-1).

R20-6-218. Repealed

Historical Note

Adopted effective November 9, 1984 (Supp. 84-6). R20-6-218 recodified from R4-14-218 (Supp. 95-1). Section repealed by final rulemaking at 7 A.A.R. 5443, effective November 16, 2001 (Supp. 01-4). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 491, effective September 30, 2001 (Supp. 02-1) (see Editor's Note above).

ARTICLE 3. FINANCIAL PROVISIONS AND PROCEDURES

R20-6-301. Expired

Historical Note

Former General Rule Number 3. R20-6-301 recodified from R4-14-301 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 491, effective September 30, 2001 (Supp. 02-1).

R20-6-302. Expired

Historical Note

Former General Rule 62-11. R20-6-302 recodified from R4-14-302 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 491, effective September 30, 2001 (Supp. 02-1).

R20-6-303. Termination of Certificate of Authority and Release of Deposit

- A. Domestic Insurers.** To request termination of a certificate of authority and, if applicable, release of statutory deposit, a domestic insurer shall file all of the following with the director:
1. A written request for termination of certificate of authority and release of deposit;
 2. The insurer's original certificate of authority or an affidavit of lost certificate of authority;
 3. A statement of the insurer's financial condition as of a date within 60 days of the filing date of the request for termination that includes a written statement, signed by two officers of the insurer as authorized on the jurat page of the insurer's most recent annual statement, verifying that the statement of financial condition reflects the insurer's financial position as of the date signed.
 4. A plan of extinguishment for its outstanding liabilities that satisfies the requirements of subsection (C) or a sworn affidavit stating that the insurer has no outstanding liabilities to policyholders or claimants under subsection (C);
 5. A certified copy of the insurer's Board of Directors resolution or other documentation of the insurer's official action taken according to the insurer's statutorily required organizational documents approving the insurer's:
 - a. Withdrawal from the insurance business,
 - b. Dissolution of the insurer,
 - c. Merger with an insurer authorized in Arizona to transact the insurer's previously written and active lines of business of the insurer requesting termination, or
 - d. Transfer of domicile to another state or country.
 6. A copy of the insurer's Articles of Dissolution, Articles of Merger, Articles of Amendment, Articles of Redomestication, or other documentation that the insurer intends to file with the Arizona Corporation Commission after issuance of the Director's order as provided in subsection (D)(2);
 7. If requested by the director, a written agreement that guarantees payment of substantially all liabilities of the domestic insurer, other than obligations extinguished under subsection (C).
- B. Foreign and Alien Insurers.** To request termination of its certificate of authority and, if applicable, release of its deposit, a foreign or alien insurer shall file all of the following with the director:
1. A written request for termination of certificate of authority and release of deposit;
 2. The insurer's original certificate of authority or an affidavit of lost certificate of authority;
 3. A statement of the insurer's financial condition as of a date within 60 days of the filing date of the request for termination that includes a written statement, signed by two officers of the insurer as authorized on the jurat page of the insurer's most recent annual statement, verifying that the statement of financial condition reflects the insurer's financial position as of the date signed.
 4. A plan of extinguishment for its Arizona liabilities that satisfies the requirements of subsection (C) or a sworn

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- affidavit stating that the insurer has no Arizona liabilities under subsection (C);
5. A copy of an order issued by the insurance director or other appropriate regulatory authority in the insurer's state or country of domicile that approves or authorizes either the insurer's:
 - a. Withdrawal from the insurance business,
 - b. Dissolution of the insurer,
 - c. Merger (approval of the merger from the states of domicile of the insurers), or
 - d. Transfer of domicile, if applicable.
 6. A copy of the insurer's Articles of Dissolution, Articles of Merger, Articles of Amendment, Articles of Redomestication or other required documentation that the insurer filed in its state of domicile; and
 7. If requested by the director, a written agreement that guarantees payment of substantially all Arizona liabilities of the insurer, other than obligations extinguished under subsection (C).
- C. Insurer's Plan for Extinguishment of Liabilities.**
1. To extinguish substantially all liabilities under subsection (A)(4) or subsection (B)(4) as applicable, an insurer may:
 - a. Reinsure the insurer's business in force with another insurer by entering into an agreement of bulk reinsurance that shall be effective when filed with and approved in writing by the director.
 - i. The agreement shall provide for assumption of all policyholder claims by the reinsurer including claims incurred but unreported as of the effective date of the agreement.
 - ii. The agreement may include recapture provisions exercisable by the insurer in the event the termination of its certificate of authority is not completed.
 - iii. Unless the director otherwise approves, the agreement shall provide that the reinsurer be licensed in Arizona for the particular lines of business reinsured.
 - b. Merge with another insurer that:
 - i. Assumes the liabilities of the non-surviving insurer; and
 - ii. Is authorized in Arizona for the previously written and active lines of business assumed, unless otherwise approved by the director.
 - c. Use its deposit, any additional security deposit or both to secure payment of former policyholder, policyholder, or claimant liabilities that are not reinsured or otherwise secured.
 2. For purposes of this Section, "substantially all liabilities" under Title 20 means all policyholder and claimant obligations reported by the insurer in the statement of financial condition, whether or not liquidated in amount, and shall include former policyholder claims and rights to refunds.
- D. Consideration of the Request for Termination of Certificate of Authority and Release of Deposit under subsections (A) and (B).**
1. If the director determines that the insurer has extinguished substantially all liabilities as required under this Section and has otherwise demonstrated compliance with this Section and A.R.S. Title 20, the director shall grant the request to terminate the certificate of authority and, if appropriate, release the insurer's deposit, provided:
 - a. The insurer has no fees, taxes, assessments or filings outstanding to the Department; and
 - b. The insurer is not subject of any pending investigation or examination under Title 20 by the Department.
 2. The director's order shall condition the release of a domestic insurer's deposit upon receipt by the director of evidence of the official filing with the Arizona Corporation Commission of the documentation described in subsection (A)(6).
 3. If the director determines that the insurer is unable to extinguish substantially all liabilities as required under this Section, or otherwise has not complied with this Section or with A.R.S. Title 20, the director shall notify the insured in writing that the request has been denied and the reasons for the denial.
- E. Exclusions. This Section does not apply to:**
1. An insurer's exchange and substitution of cash or eligible securities under A.R.S. § 20-586;
 2. An insurer's withdrawal of excess deposits, either cash or eligible securities, under A.R.S. §§ 20-587 and 20-588(A)(2); or
 3. Releases of deposits made under A.R.S. § 20-588(A)(3).
- Historical Note**
- Former General Rule 72-29. R20-6-303 recodified from R4-14-303 (Supp. 95-1). Section R20-6-303 repealed; new Section R20-6-303 made by final rulemaking at 14 A.A.R. 3432, effective October 4, 2008 (Supp 08-3).
- R20-6-304. Reserved**
- R20-6-305. Expired**
- Historical Note**
- Adopted effective September 13, 1978, except that it shall apply to the accounting treatment for unearned premium reserves and reinsurance premium receivables for credit life disability insurance on January 1, 1979, and all annual statements filed for periods on or after that date (Supp. 78-5). R20-6-305 recodified from R4-14-305 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 491, effective September 30, 2001 (Supp. 02-1).
- R20-6-306. Reserved**
- R20-6-307. Life and Disability Reinsurance Agreements**
- A. Scope.** This rule applies to all domestic life and disability insurers and reinsurers, and to all other licensed life and disability insurers and accredited reinsurers that are not subject to a substantially similar rule in their jurisdictions of domicile. This rule applies to the disability business of licensed property and casualty insurers. This rule does not apply to assumption reinsurance, yearly renewable term reinsurance, or nonproportional stop loss or catastrophe reinsurance, or similar forms of nonproportional reinsurance.
- B. Definitions**
1. "Agreement" means a reinsurance agreement and any amendment to a reinsurance agreement.
 2. "Credit Quality" means the risk that invested assets supporting the reinsured business will decrease in value but excludes decreases to changes in interest rate.
 3. "Department" means the Arizona Department of Insurance.
 4. "Director" means the Director of the Arizona Department of Insurance.
 5. "Disintermediation" means the risk that interest rates will rise and policy loans and surrenders will increase or maturing contracts will not renew at anticipated rates of renewal.

6. "Lapse" means the risk that a policy will voluntarily terminate before the recoupment of a statutory surplus strain experienced at issuance of the policy.
7. "Reinvestment" means the risk that interest rates will fall and funds reinvested will therefore earn less than expected.

C. Accounting Requirements

1. Unless authorized by the director, an insurer shall not, for reinsurance ceded, reduce any liability, or establish any asset in any statutory financial statement filed with the Department if, by the terms of the agreement, or in effect, any of the following conditions exist:
 - a. Renewal expense allowances provided or to be provided to the ceding insurer by the reinsurer in any accounting period are not sufficient to cover the ceding insurer's allocable renewal expenses anticipated at the time the business is reinsured on the portion of the business reinsured, unless a liability is established for the present value of the shortfall using assumptions equal to the applicable statutory reserve basis on the business reinsured.
 - b. The ceding insurer is required to reimburse the reinsurer for negative experience under the agreement. Neither the offset of the ceding insurer's experience refunds against current and prior years' losses, nor payment by the ceding insurer of an amount equal to the reinsurer's current and prior years' losses upon voluntary termination of in-force reinsurance by the ceding insurer, shall be considered a reimbursement to the reinsurer for negative experience.
 - c. The ceding insurer may be deprived of surplus or assets at the reinsurer's option or automatically upon the occurrence of a specified event, including the insolvency of the ceding insurer. Termination of the agreement by the reinsurer for nonpayment of reinsurance premiums or other amounts due shall not be considered a deprivation of surplus or assets within the meaning of this subsection.
 - d. The ceding insurer is required, at scheduled times, to terminate the agreement or recapture automatically all or part of the reinsurance ceded.
 - e. The ceding insurer may be required to pay the reinsurer amounts other than from income reasonably expected from the reinsured policies.
 - f. Significant risks inherent in the business reinsured are not transferred to the reinsurer. Table A identifies the risks deemed significant for representative types of business.
 - g. The credit quality, reinvestment, or disintermediation risk is significant for the business reinsured and the ceding company does not transfer the underlying assets to the reinsurer, segregate the underlying assets in a trust or escrow account, or otherwise segregate the underlying assets. The assets that support the reserves for classes of business that do not have a significant credit quality, reinvestment, or disintermediation risk, or for long-term care or long-term disability insurance, traditional non-par permanent, traditional par permanent, adjustable premium permanent, indeterminate premium permanent, or universal life fixed premium with no dump-in

premiums allowed, may be held by the ceding company without segregation. To determine the reserves for classes of business, the supporting assets of which may be held without being segregated, the reserve interest rate adjustment formula shall reflect the ceding company's investment earnings and incorporate all realized and unrealized gains and losses reported in the ceding insurer's statutory financial statement.

- h. Settlements are made less frequently than quarterly or payments due from the reinsurer are not made in cash within 90 days of the settlement date.
 - i. The ceding insurer is required to make representations or warranties unrelated to the business reinsured.
 - j. The ceding insurer is required to make representations or warranties related to future performance of the business reinsured.
2. An agreement entered into after the effective date of this rule to reinsure business issued before the effective date of the agreement shall be filed by the ceding insurer with the Director within 30 days after execution of the agreement. Each filing shall be accompanied by a description of the corresponding reduction in liabilities or other credit for reinsurance, and any other financial impact of the agreement, reported in the ceding insurer's statutory financial statements. When an increase in surplus net of federal income tax results from an agreement falling under this subsection, the ceding insurer shall separately identify the increase as a surplus item in the aggregate write-ins for gains and losses in surplus in the Capital and Surplus account of the ceding insurer's statutory financial statement. As earnings emerge from the business reinsured, the ceding insurer shall report in its statutory financial statement recognition of surplus increase as income on a net of tax basis as reinsurance ceded.

D. Written Agreements

1. A ceding insurer shall not reduce any liability or establish any asset in any statutory financial statement filed with the Department, unless the ceding insurer and the reinsurer have executed an agreement or a binding letter of intent by the "as of" date of the statutory financial statement.
2. A ceding insurer shall not be allowed a credit for the reinsurance ceded based on a letter of intent unless the ceding insurer and the reinsurer execute an agreement within 90 days from the execution date of the letter of intent.
3. The agreement shall provide that:
 - a. The agreement constitutes the entire contract between the parties with respect to the business reinsured, and there are no understandings between the parties other than as expressed in the agreement; and
 - b. Any change or modification to the agreement shall be void unless made by written amendment signed by all parties.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-307 recodified from R4-14-307 (Supp. 95-1). Amended effective December 7, 1995 (Supp. 95-4).

Table A. Risk Categories

Risk Categories:

- (a). Morbidity (d). Credit Quality

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- (b). Mortality
- (c). Lapse
- (e). Reinvestment
- (f). Disintermediation

	a	b	c	d	e	f
Disability Insurance, other than long-term care or long-term disability insurance	+	0	+	0	0	0
Long-term care or long-term disability insurance	+	0	+	+	+	0
Immediate Annuities	0	+	0	+	+	0
Single Premium Deferred Annuities	0	0	+	+	+	+
Flexible Premium Deferred Annuities	0	0	+	+	+	+
Guaranteed Interest Contracts	0	0	0	+	+	+
Other Annuity Deposit Business	0	0	+	+	+	+
Single Premium Whole Life	0	+	+	+	+	+
Traditional Non-par Permanent Life	0	+	+	+	+	+
Traditional Non-par Term Life	0	+	+	0	0	0
Traditional Par Permanent Life	0	+	+	+	+	+
Traditional Par Term Life	0	+	+	0	0	0
Adjustable Premium Permanent Life	0	+	+	+	+	+
Indeterminate Premium Permanent Life	0	+	+	+	+	+
Universal Life Flexible Premium	0	+	+	+	+	+
Universal Life Fixed Premium, with dump-in premiums allowed	0	+	+	+	+	+

+ - Significant

0 - Insignificant

Historical Note

Adopted effective December 7, 1995 (Supp. 95-4). Corrected misspelled word “adjustable” as submitted in final rule (Supp. 98-3).

R20-6-308. Expired

Historical Note

Adopted effective March 22, 1993 (Supp. 93-1). R20-6-308 recodified from R4-14-308 (Supp. 95-1). Section expired under A.R.S. § 41-1056(J) at 22 A.A.R. 3374, effective May 31, 2016 (Supp. 16-4).

Historical Note

New Section adopted by final rulemaking at 6 A.A.R. 255, effective January 1, 2000 (Supp. 99-4). Section expired under A.R.S. § 41-1056(E) at 13 A.A.R. 1278, effective September 30, 2006 (Supp. 07-1).

Appendix A. Expired

- Table 1. Expired**
- Table 2. Expired**
- Table 3. Expired**
- Table 4. Expired**
- Table 5. Expired**
- Table 6. Expired**

R20-6-309. Expired

Historical Note

New Section adopted by final rulemaking at 6 A.A.R. 255, effective January 1, 2000 (Supp. 99-4). Section expired under A.R.S. § 41-1056(E) at 13 A.A.R. 1278, effective September 30, 2006 (Supp. 07-1).

Historical Note

Appendix A adopted by final rulemaking at 6 A.A.R. 255, effective January 1, 2000 (Supp. 99-4). Appendix A (including Tables 1 through 6) expired under A.R.S. § 41-1056(E) at 13 A.A.R. 1278, effective September 30, 2006 (Supp. 07-1).

R20-6-309.01. Expired

Historical Note

New Section adopted by final rulemaking at 6 A.A.R. 255, effective January 1, 2000 (Supp. 99-4). Section expired under A.R.S. § 41-1056(E) at 13 A.A.R. 1278, effective September 30, 2006 (Supp. 07-1).

R20-6-309.02. Expired

Historical Note

New Section adopted by final rulemaking at 6 A.A.R. 255, effective January 1, 2000 (Supp. 99-4). Section expired under A.R.S. § 41-1056(E) at 13 A.A.R. 1278, effective September 30, 2006 (Supp. 07-1).

ARTICLE 4. TYPES OF INSURANCE COMPANIES

R20-6-401. Proxies, Consents, and Authorizations of Domestic Stock Insurers

A. The Department incorporates by reference National Association of Insurance Commissioners Model Laws, Regulations and Guidelines, Volume III, pp. 490-1 through 490-40, Regulation Regarding Proxies, Consents, and Authorizations of Domestic Stock Insurers, April 1995 (and no future editions or amendments), which is on file with the Office of the Secretary of State and available from the Department of Insurance, 2910 N. 44th St., Phoenix, AZ 85018 and the National Association of Insurance Commissioners, Publications Department, 2301 McGee St., Suite 800, Kansas City, MO 64108, modified as follows:

R20-6-309.03. Expired

Historical Note

New Section adopted by final rulemaking at 6 A.A.R. 255, effective January 1, 2000 (Supp. 99-4). Section expired under A.R.S. § 41-1056(E) at 13 A.A.R. 1278, effective September 30, 2006 (Supp. 07-1).

R20-6-309.04. Expired

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Section 1 A is modified to read: “No domestic stock insurer that has any class of equity securities held of record by 100 or more persons, or any director, officer or employee of that insurer, or any other person, shall solicit, or permit the use of the person’s name to solicit, by mail or otherwise, any proxy, consent, or authorization in respect to any class of equity securities in contravention of this regulation and Schedules A and B, hereby made a part of this regulation.”

- B.** Domestic stock insurance companies shall comply with this Section as required under A.R.S. § 20-143(B).

Historical Note

Former General Rule 57-3. R20-6-401 recodified from R4-14-401 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3). New Section made by final rulemaking at 9 A.A.R. 1086, effective March 6, 2003 (Supp. 03-1).

R20-6-402. Expired**Historical Note**

Former General Rule 69-19. R20-6-402 recodified from R4-14-402 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).

Exhibit A. Expired**Historical Note**

Former General Rule 69-19. R20-6-402 recodified from R4-14-402 (Supp. 95-1). Exhibit expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).

Exhibit B. Expired**Historical Note**

Former General Rule 69-19. R20-6-402 recodified from R4-14-402 (Supp. 95-1). Exhibit expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).

R20-6-403. Expired**Historical Note**

Former General Rule 69-21. R20-6-403 recodified from R4-14-403 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).

Appendix A. Expired**Historical Note**

R20-6-403, Appendix A recodified from R4-14-403, Appendix A (Supp. 95-1). Appendix expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).

Appendix B. Expired**Historical Note**

R20-6-403, Appendix B recodified from R4-14-403, Appendix B (Supp. 95-1). Appendix expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).

Appendix C. Expired**Historical Note**

R20-6-403, Appendix C recodified from R4-14-403, Appendix C (Supp. 95-1). Appendix expired under

A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).

R20-6-404. Repealed**Historical Note**

Former General Rule 73-31; Repealed effective January 1, 1981 (Supp. 80-6). R20-6-404 recodified from R4-14-404 (Supp. 95-1).

R20-6-405. Health Care Services Organization

- A.** Authority. This rule is adopted pursuant to A.R.S. §§ 20-142, 20-143, 20-106 and 20-1051 through 20-1068.
- B.** Purpose. The purpose of this rule is to implement the legislative intent, as expressed in Chapter 128, Laws of 1973, to regulate and control Health Care Services Organizations in the State of Arizona, (including, but not limited to Certificate of Authority, licensing, fees for licensing, disciplinary procedures for agents and control of solicitation of members and evidences of coverage).
- C.** Scope
1. The scope of this Rule is the scope of A.R.S. Title 20 as it relates to Insurers or Hospital or Medical Service Corporations. As it relates to Health Care Services Organizations, the scope of this rule is the scope of Title 20, Chapter 1 and Title 20, Chapter 4, Article 9, as provided in A.R.S. § 20-1068. This rule is applicable to agents of persons, and persons operating or proposing to operate Health Care Services Organizations in the State of Arizona.
 2. The statutory authority for this rule, A.R.S. Title 20, Chapter 4, Article 9, does not provide for exemptions therefrom for persons or agents of persons subject thereto, and no such exemption is intended or should be presumed by this rule or any provision thereof.
- D.** Repeal. This rule does not repeal any known prior rule, memorandum, bulletin, directive or opinion on this subject matter. If such prior rule or directive exists and is in conflict herewith, the same is repealed hereby.
- E.** Definitions. As used in this rule, unless the context otherwise requires:
1. “Agent” has the meaning of A.R.S. § 20-282.
 2. “Basic Health Care Services” has the meaning of A.R.S. § 20-1051.
 3. “Certificate of Authority” means a Certificate authorizing operation of a Health Care Services Organization.
 4. “Director” means the Director of Insurance of the State of Arizona.
 5. “Enrollee” has the meaning of A.R.S. § 20-1051.
 6. “Evidence of coverage” has the meaning of A.R.S. § 20-1051.
 7. “Health Care Plan” has the meaning of A.R.S. § 20-1051.
 8. “Health Care Services” has the meaning of A.R.S. § 20-1051.
 9. “Health Care Services Organizations” has the meaning of A.R.S. § 20-1051.
 10. “Hospital Service Corporation” has the meaning of A.R.S. § 20-822.
 11. “Insurer” has the meaning of A.R.S. § 20-106(C).
 12. “License” means the authority to act as an agent of a Health Care Services Organization.
 13. “Medical Service Corporation” has the meaning of A.R.S. § 20-822.
 14. “Net charges” means the total of all sums prepaid by or for all enrollees, less approved refunds, adjustments and deductions, as consideration for Health Care Services of a Health Care Plan under an Evidence of Coverage.

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15. "Person" has the meaning of A.R.S. § 20-1051.
 16. "Physician and patient relationship" has the meaning of A.R.S. § 20-833.
 17. "Prepaid Health Plans" means any Health Care Plan to pay or make reimbursement for Health Care Services on a prepaid basis other than insured plans otherwise authorized and approved under A.R.S. Title 20.
 18. "Prepaid Group Practice Plan" means a person authorized and approved under A.R.S. Title 20.
 19. "Provider" has the meaning of A.R.S. § 20-1051.
 20. "Transact" has the meaning of A.R.S. § 20-106(A) and (B).
 21. "Unqualified agent" means a person directly or indirectly representing or acting for a Health Care Services Organization and not qualified as an agent thereof.
- F. Certificate of Authority**
1. Policy. Persons and agents of persons operating Health Care Services Organizations as of May 7, 1973, shall comply with the application requirements of A.R.S. § 20-1052 on or before August 7, 1973.
 2. A Certificate of Authority shall not be granted until the Director is satisfied that the requirements of A.R.S. §§ 20-1052, 20-1053 and 20-1054 are met and will continue to be met.
 3. An examination of an applicant at the expense of the applicant for a Certificate of Authority may be ordered to be made if the applicant is not a resident, is controlled by a non-resident, or maintains a head or principal office out of its service area, and will be ordered to be made if the applicant contracts with providers, or for services outside a reasonable area, or has contract obligations under its evidence of coverage that are, or appear to be, inequitable or unreasonable as to the enrollees.
- G. Certificate of Authority – Application**
1. A person required to be qualified to do business in this State as a Health Care Services Organization, pursuant to A.R.S. § 20-1052 shall file an application for Certificate of Authority on Department Form E-104.
 2. Applications failing to comply with the requirements of A.R.S. § 20-1053 will be denied without prejudice to the filing of an application complying with such requirements.
 3. Health Care Services Organizations operating in this State as of May 7, 1973, and having submitted a sufficient application for Certificate of Authority as required by this rule, including the disclosure filings of paragraph (7) of this subsection, may continue to operate as an organization until the Director acts upon the application.
 4. The application for Certificate of Authority shall be verified by an authorized and qualified officer of the Health Care Services Organization.
 5. The application for Certificate of Authority shall be accompanied by the fees required for a hospital or medical service corporation by A.R.S. § 20-167 and a tax return or returns on Department Form E-162, for the calendar year previous to the calendar year of application during which the applicant has done business in this State as a Health Care Services Organization, and the amount of tax due thereon after the effective date hereof, if any, as provided by A.R.S. § 20-1060. The filing of such returns or payment of such tax may be adjusted or waived by the Director upon application and affirmative showing in writing therefor justifying the adjustment or waiver.
 6. The Director may, upon written request accompanied by supporting documentation justifying the request, authorize the substitution of public information filed by an applicant under similar statutes or regulations in another state, or under federal requirements, or may waive such information or additional information.
- H. Certificate of Authority – Application. The application for Certificate of Authority shall be accompanied by a power of attorney as required by A.R.S. § 20-1053(A)(10) on Department Form E-128.**
- I. Certificate of Authority – Grounds for denial**
1. Policy. A Certificate of Authority to operate a Health Care Services Organization shall not be granted until the Director is satisfied by the affirmative showing, verified by the applicant, that all of the requirements of A.R.S. §§ 20-1052, 20-1053 and 20-1054 are met and will continue to be met.
 2. Guidelines. The guidelines and standards for determination of appropriate mechanisms to achieve an effective Health Care Plan include, but are not limited to the following:
 - a. Ability to provide basic Health Care Services without undue restrictions, limitations, discrimination, unreasonable fee schedules, or unreasonable administrative costs; an affirmative showing that the form of organization does not evidence any coercion, duress or other compulsion over members;
 - b. The form of organization does not lend itself to practices prohibited by A.R.S. §§ 20-441 through 20-459, and
 - c. The evidence of coverage does not contain provisions or statements which are unjust, inequitable, misleading, deceptive or untrue or encourage misrepresentation.
 3. Failure to pay obligations. Applications for a Certificate of Authority to operate a Health Care Services Organization may be denied or rejected if the applicant has failed after 30 days from the entry of final judgment, to pay obligations within the provisions of an evidence of coverage issued by such applicant. The provisions of this Section may be waived by the Director upon a clear affirmative showing that the applicant is defending an action or appealing a judgment at law or equity in a court of this state, or is required to obtain a Certificate of Authority so as to maintain such action.
 4. Unauthorized agents. Applications for a Certificate of Authority to operate a Health Care Services Organization may be denied or rejected, after stated cause and opportunity to answer, if the applicant has, 90 days after the effective date, permitted transactions by an unauthorized agent.
- J. Solicitation requirements**
1. Forms for evidences of coverage, advertising matter, sales material and amendments thereto, will not be approved until the Director is satisfied by filing of Department Form P-107 accompanying the filing of such form and the payment of necessary fees, that the require-

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- ments of A.R.S. §§ 20-1057, 20-1054(2), and 20-1061 have been met and will continue to be met.
2. Each Health Care Services Organization shall maintain at its home or principal office a complete file containing every printed, published or prepared advertisement brochure, form letter of solicitation, evidence of coverage, certificate, agreement or contract, and a copy of all radio and television forms of the above hereafter disseminated in this or any other State with a notation attached to each such solicitation or inducement to indicate the manner and extent of distribution and the date of approval by the Department of such solicitation. Such advertising file shall be maintained for a period of not less than three years.
- K.** Annual report. Each Health Care Services Organization required to file an annual statement, shall, on or before March 1 of each year, file with the Director, together with its annual statement on Department Form E-13, a certificate executed by an authorized officer of the Health Care Services Organization stating that to the best of his knowledge, information and belief, all written solicitations disseminated during the preceding statement year complied or were made to comply with the provisions of Title 20, Chapter 4, Article 9, and this rule, and that no forms of solicitation were disseminated without the prior approval of the Director.
- L.** Taxes
1. All Health Care Services Organizations operating and transacting business in the State of Arizona shall on or before March 1 and with the filing of the Annual Report, file a tax return on Department Form E-162, and pay the tax due on such return pursuant to A.R.S. § 20-1060.
 2. A tax return required to be filed and filed with an application for Certificate of Authority may cover a period of time of less than a calendar year as specified in the return and approved by the Director. Annual tax returns required to be filed coincident with the annual report shall be for the full calendar year next preceding the date of filing the annual report.
 3. Net charges, as in this rule defined, shall represent the net charges received during the calendar year next preceding the date of filing the annual report and tax return.
- M.** Deposit requirements
1. In the event a Health Care Services Organization determines to maintain statutory deposits by a surety bond, such surety bond shall be in form as approved by the Director guaranteeing the payment of Health Care Services furnished to enrollees, and shall be deposited with the State Treasurer.
 2. In the event a Health Care Services Organization determines to maintain the deposit requirements by filing securities with the State Treasurer, a full and complete statement of the securities proposed to be deposited, together with sufficient information to permit a determination of eligibility of such securities shall be filed with the Director on Department Form E-123, and such securities shall not be deposited until such securities are approved by the Director in writing.
 3. No securities deposited as herein provided shall be exchanged or substituted for similar securities, except upon the prior written approval of the Director.
 4. Health Care Services Organizations claiming to be exempt from the deposit requirement, pursuant to A.R.S. § 20-1055(f) shall submit to the Director an affirmative showing or certification executed by an authorized federal, state or municipal government or political subdivision thereof, demonstrating operational commitments equivalent to the statutory deposit requirements.
5. Statutory deposits shall not be withdrawn or a surety bond cancelled until all contingent and perfected liens, including judgments, debts, and other liabilities for payment of Health Care Services to which the enrollee is entitled under the evidence of coverage shall have been paid and the Director has given his authority in writing to withdraw such deposits or cancel such bonds.
- N.** Reserve requirements. Reserves required by A.R.S. § 20-1056 shall be deposited or maintained as cash, as Certificates of Deposit, or as securities eligible for investment of the capital of domestic insurers, pursuant to A.R.S. §§ 20-537 and 20-538.
- O.** Insurers and hospital and medical service corporations – Certificate of Authority
1. Insurers, Hospital Service Corporation, Medical Service Corporations, and Hospital and Medical Service Corporations, holding current Certificates of Authority to do business in this state may organize and operate Health Care Services Organizations jointly or severally without compliance with the deposit and reserve requirements of the statute, if the application contains an affirmative showing that the applicant organization has complied with comparable provisions of Title 20, and is an appropriate mechanism to achieve an effective Health Care Plan.
 2. The provisions of statute and this rule applying to Certificates of Authority and Application therefor, shall apply to all insurers, Hospital Service Corporations, Medical Service Corporations, and Hospital and Medical Service Corporations doing business in this state.
 3. Organizations claiming exemption or partial exemption pursuant to A.R.S. § 20-1063(c) shall file with the Director simultaneously with the application for Certificate of Authority, a statement affirmatively showing that the applicant has complied with provisions of Title 20 A.R.S. comparable to or more restrictive than the provisions of Title 20, Chapter 4, Article 9, and shall have received the written approval of the Director for such exemption or partial exemption.
- P.** Application, examination and licensing of agents
1. No agent of a Health Care Services Organization shall be eligible for transactions of a Health Care Services Organization, unless, prior to making any solicitation or transaction, he has been appointed agent by a Health Care Services Organization holding a current valid Certificate of Authority and has been licensed as herein provided. Persons directly or indirectly representing or acting for a Health Care Services Organization and not licensed as herein provided, or otherwise qualified under A.R.S. Title 20, shall be an unqualified agent.
 2. Any person applying for a license as an agent of a Health Care Services Organization shall do so by filing with the Department of Insurance the following:
 - a. An application for such license on a form approved by the Director of the Department of Insurance;
 - b. The required fees for such license;
 - c. Such additional information as the Director may deem necessary.
 3. The licensing of an agent of a Health Care Services Organization shall not become effective until such applicant shall have satisfactorily passed a written examination in accordance with A.R.S. § 20-292 as supplemented by A.R.S. § 20-167.
 4. The examination shall be given in such places and at such times as the Director shall from time to time designate.

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5. The form of examination and the manual may be altered and amended from time to time, so as to represent a fair test of the applicant's qualifications.
 6. Every applicant for license shall satisfactorily complete the examination given with a grade of at least 70%, or such other percentage as may be fixed from time to time by the Director prior to the examination commensurate with the nature of the examination given.
 7. License and examination fees shall be in accordance with A.R.S. § 20-167.
 8. Report of the results of any examination given pursuant to this rule shall be mailed to the applicant and to the applicant's Health Care Services Organization at the address shown on the application.
 9. Except as modified by this rule, the provisions for examination, licensing, annual fees and disciplinary procedures of Chapter 2, Article 3 of Title 20, shall apply.
 10. Any agent licensed in this state shall immediately report to the Director any judgment or injunction entered against him on the basis of conduct deemed to have involved fraud, deceit, misrepresentation, or other violation affecting his license and all complaints or charges of misconduct lodged with his employer, any public agency of the state, or another state.
 11. The Director may reject any application or suspend or revoke, or refuse to renew any agent's license for inducements or statements which are unjust, unfair, inequitable, misleading or deceptive, or which encourage misrepresentation, or are untrue or misleading.
 12. The rules, standards and guidelines governing any proceeding relating to the suspension or revocation of the license of a life insurance agent, where applicable, shall also govern any proceedings for suspension or revocation of the license of an agent of a Health Care Services Organization.
 13. Renewal of a license of an agent shall follow the same procedure as heretofore established for renewal of insurance agents' licenses in this state.
 14. Renewal of a license of an agent shall follow the same procedure as heretofore established for renewal of insurance agents' licenses in this state.
- Q. Forms**
1. The forms prescribed by this rule and the instructions applicable thereto are adopted as requirements of the Director and necessary for the protection of citizens of this state. Such forms, instructions, manuals or examinations are those currently in use, but the same may be amended without reference to this rule and when approved as amended are incorporated in this rule by reference. The form of manual or examination of agents, or any form adopted by the Director may be reproduced for the purpose of reporting or for other purposes.
 2. For good cause shown, the Director may authorize the filing of forms and reports on dates other than required by this rule, if applied for in writing not less than 10 days prior to the due date of such report and statement, exhibit, return or accounting.
- R. Severability.** In any provision of this rule or the forms, statements, returns or reports made part of this rule, or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect the provisions of applications of this rule, which can be given effect without the invalid provision or application, and to this end the provisions of this rule are declared to be severable.
- S. Effective date.** This rule became effective on the 7th day of May, 1973. Amendments to this rule shall become effective upon filing with the Secretary of State.
- Historical Note**
- Former General Rule 73-33; Amended subsections (E), (P), (R), (S), and (T) effective August 12, 1981 (Supp. 81-4). R20-6-405 recodified from R4-14-405 (Supp. 95-1).
- R20-6-406. Expired**
- Historical Note**
- Adopted effective May 18, 1978 (Supp. 78-3). R20-6-406 recodified from R4-14-406 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E), filed in the Office of the Secretary of State August 24, 2000 (Supp. 00-3).
- R20-6-407. Service Companies**
- A. Scope.** This rule shall apply to all service companies except those which are exempt under A.R.S. § 20-1095.02.
- B. Definitions.**
1. "Gray Market" auto means an imported motor vehicle which has not been certified for all safety, emission, and other federal and state standards prior to the arrival of the vehicle into the United States.
 2. "Service" within the meaning of Article 11, Chapter 4, Title 20 includes reimbursement for towing, car rental, lodging or travel breakdown expenses.
 3. The "Contract Holder" means the consumer as defined in A.R.S. § 20-1095(1).
- C. Application for service company permit.**
1. The application for a service company permit under this rule shall be on the form designated by the director which shall contain the following information:
 - a. The name of applicant;
 - b. Arizona address of applicant;
 - c. The home office address of applicant;
 - d. Type of entity (e.g. corporation, partnership);
 - e. Type of equipment to be serviced;
 - f. Fiscal year of applicant;
 - g. A list of suspensions, revocations or other disciplinary or rehabilitative actions against the service company in this or any other jurisdiction. The application form shall be signed under oath and acknowledged by the chief executive officer, chairman of the board of directors, or other person having power of attorney, in which case the power of attorney shall be attached.
 2. The following items shall be attached to the application form and shall complete the application:
 - a. A copy of the service company's most recent financial statement, sworn to and certified by the owner, duly elected officers, or a certified public accountant.
 - b. Evidence of having deposited cash or acceptable securities pursuant to A.R.S. § 20-1095.04.
 - c. Surety bond in lieu of deposit under subparagraph (b) on a form acceptable to the Director.
 - d. Initial nonrefundable permit fee of \$100 with each new application.
 - e. A biographical affidavit, on a form approved by the director, for each officer, director, manager or person owning 25% or more of the service company, and for each officer, director, manager or person owning 25% or more of an entity which owns the service company.

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- f. A copy of the service company's service contract, application, claim forms, brochures, and other forms used in connection with the sale.
- D. Deposit.** A service company providing a deposit of cash or alternatives to cash pursuant to A.R.S. § 20-1095.04 shall maintain the deposit in the amount required and such deposit shall not be encumbered. The deposit shall not be released except pursuant to one of the following:
1. The service company provides a bond or mechanical reimbursement policy which covers the outstanding service contract liabilities.
 2. All outstanding service contracts and liabilities thereunder have been assumed by a service company, in good standing, with the approval of the director, acknowledged by the assuming service company's administrator and acknowledged by endorsement by the mechanical reimbursement insurer or surety.
 3. Evidence satisfactory to the director that:
 - a. All outstanding service contracts and liabilities have expired or been cancelled in accordance with the service contract terms,
 - b. That all claims have been settled,
 - c. That there is no reason to believe there are any unreported claims, and
 - d. That the service company is financially able and agrees to be financially responsible for any valid unreported claims.
- E. The service contract, approval of forms.**
1. Each service company holding a service company permit or applying for such permit shall submit all contract, claim and application forms, brochures and other advertising material to the Director for approval not less than 30 days prior to the proposed effective date thereof. No form, brochure or other printed material may be used until approved by the Director or has been on file with the Director more than 30 days.
 2. No service contract shall be approved unless it contains a provision permitting the cancellation of the contract. The cancellation provision shall provide for a pro rata refund after deducting for administrative expenses associated with the cancellation. No claim incurred or paid shall be deducted from the amount to be returned. The cancellation provision shall not contain both cancellation penalty and a cancellation fee.
 3. No service contract or application shall be approved unless it:
 - a. Is written in nontechnical, readily understood language, using words with common everyday meanings;
 - b. Provides for the performance of services within a reasonable period of time of the request for such services by the holder of the contract;
 - c. Discloses on the face of the application and the contract:
 - i. The name, address and telephone number of the service company;
 - ii. The name, address and telephone number of the service contract administrator, if any;
 - iii. The name of the individual who sold the service contract.
 - d. Clearly, conspicuously and plainly states:
 - i. The services to be performed by the service company and the terms and conditions of such performance;
 - ii. The service fee or deductible charge, if any, to be charged, or applied, for service calls and/or each covered repair.
 - iii. Each of the systems, products, appliances and components covered by the contract;
 - iv. The period during which the contract will remain in effect;
 - v. All limitations respecting the performance of services, including any restrictions as to time periods when services may be required or will be performed;
 - vi. The cost of the service contract;
 - vii. Those specific items or components which are excluded from coverage in large bold type;
 - viii. The conditions, if any, under which the service contract or coverage may be reinstated after coverage has been voided by acts or omissions by the service contract holder;
 - ix. The material acts or omissions by the contract holder which cancel or void coverage;
4. No service contract shall be approved if:
- a. The coverage may be cancelled or voided due to acts or omissions of the service company, its assignees or subcontractors for their failure to provide correct information of their failure to perform the services or repairs provided in a timely, competent, workmanlike manner;
 - b. Parts or components repaired or replaced under the service contract are excluded;
 - c. The contract can be cancelled or voided by the service company or its representatives for the following reasons including but not limited to:
 - i. Pre-existing conditions;
 - ii. Prior use or unlawful acts relating to the product;
 - iii. Misrepresentation by either the service company or its subcontractors;
 - iv. Ineligibility for the program, including gray market, high performance and GM diesel autos.
- F. Disapproval of contracts, applications or advertising.** The director may disapprove any service contract, application or advertising material that is in violation of this rule by issuing an order specifying in what respect the service contract, application or advertising material violates this rule. Any person aggrieved by such an order can demand a hearing thereon in accordance with A.R.S. § 20-1095.09.
- G. Permit expiration; renewal.**
1. Each permit issued pursuant to this rule shall expire at midnight on the last day of the service company's fiscal year. Thereafter, the service company shall have 90 days in which to file its completed renewal application including its certified financial statement and pay the renewal fee of \$100. A permit shall remain in effect upon the service company's timely payment of the renewal fee, timely filing of its annual financial statement and completed renewal application. An incomplete application will not be considered received until it is complete.
 2. Any late filing of the renewal application, financial report or late payment of the renewal fee shall be subject to a late fee of \$25 per day. Such late fee shall not release the service company of liability for other violations of these rules or other laws.

Historical Note

Adopted effective April 30, 1981 (Supp. 81-2). Former Section R4-14-407 repealed and a new Section R4-14-407 adopted effective July 2, 1987 (Supp. 87-3). R20-6-

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407 recodified from R4-14-407 (Supp. 95-1).

R20-6-408. Motor Vehicle Service Contract Program

- A.** Scope. This rule shall apply to all motor vehicle service contract programs as defined in A.R.S. § 20-1095(5).
- B.** Definitions.
1. "Gray Market" auto means an automobile which has not been certified for all safety, emission, and other federal and state standards prior to the arrival of the vehicle into the United States.
 2. "Service" within the meaning of Article 11, Chapter 4, Title 20 includes reimbursement for towing, car rental, lodging or travel breakdown expenses.
 3. The "Contract Holder" means the consumer as defined in A.R.S. § 20-1095(1).
- C.** Application for motor vehicle service contract program.
1. The application for approval of a motor vehicle service contract program under this rule shall be on the form designated by the director which shall contain the following information:
 - a. Name of administrator;
 - b. Arizona address of administrator;
 - c. Home office of administrator;
 - d. The type of entity (e.g. corporation, partnership);
 - e. Whether the administrator is an insurer;
 - f. The name of the program. The application form shall be signed under oath and acknowledged by the chief executive officer, chairman of the board of directors, or other natural person having power of attorney to represent the entity, in which case the power of attorney shall be attached to the application.
 2. The following items shall be attached to the application form and shall complete the application:
 - a. Mechanical reimbursement insurance policy with an Arizona endorsement on a form acceptable to the Director, or an Arizona bond on a form acceptable to the Director which will be issued to each dealer or cash or securities deposited with the state treasurer through the Director's office in lieu of the policy or bond.
 - b. Initial nonrefundable permit fee of \$100 with each application. A separate and complete application and fee must be submitted for each service contract form.
 - c. A list of the dealers who propose to sell the motor vehicle service contract program, if known.
 - d. The service contract program, including all contract forms, claims forms, applications, brochures, and other forms used in connection with the sale.
 - e. Biographical affidavits, on a form approved by the Director, for each person owning 25% or more of the administrator or insurer.
 - f. The name and address of its statutory agent in Arizona for the purpose of service of process.
 3. If the administrator or insurer elects to use a mechanical reimbursement insurance policy, then the following applies to meet the requirements of A.R.S. § 20-1095.06(B):
 - a. An application shall not be submitted before an insurance company has had its rules, rates and forms approved. The insurance company must file the mechanical reimbursement policy forms, rules and rates for approval.
 - b. The cancellation procedure in the mechanical reimbursement policy, any procedure manual and the service contract shall be consistent.
 - c. The insurance company shall give insureds 30 days prior notice of any rate revisions to take effect.
 - d. Mechanical reimbursement policies which void coverage if the dealer, its own authorized repair facility, or its subcontractor provide incorrect or unverifiable information shall not be approved.
 - e. A mechanical reimbursement policy must be issued by the insurance company to each dealer selling a service contract program.
4. An administrator or an insurer applying for approval pursuant to A.R.S. § 20-1095.06 of a motor vehicle service contract program, which is insured by a mechanical reimbursement policy or surety bond, shall certify that the policy or surety bond is effective prior to the sale of contracts by the dealer.
5. In the event that a surety bond, cash or securities are used to meet the requirements of A.R.S. § 20-1095.06(B), the administrator or insurer shall file with the Director within 90 days after the end of the motor vehicle dealer's accounting year a report stating the number of contracts in force at the end of the year and that the surety bond, cash or securities has been increased as required by A.R.S. § 20-1095.06.
- D.** Approval of forms.
1. Each administrator or insurer applying for approval of its motor vehicle service contract program, or amendment thereof, shall submit all contract, claim, and application forms, brochures and other advertising material to the Director for approval not less than 30 days prior to the proposed effective date thereof. No form, brochure or other printed material may be used until approved by the Director or has been on file with the Director more than 30 days.
 2. No service contract shall be approved unless it contains a provision permitting the cancellation of the contract. The cancellation provision shall provide for a pro rata refund after deducting for administrative expenses associated with the cancellation. No claim incurred or paid shall be deducted from the amount to be returned. The cancellation provision shall not contain both a cancellation penalty and a cancellation fee.
 3. No service contract or application shall be approved unless it:
 - a. Is written in nontechnical, readily understood language, using words with common everyday meanings;
 - b. Provides for the performance of services within a reasonable period of time of the request for such services by the holder of the contract;
 - c. Discloses on the face of the application and the contract:
 - i. The name, address and telephone number of the motor vehicle dealer, if any;
 - ii. The name, address and telephone number of the contract administrator, if any;
 - iii. The name of the individual who sold the service contract.
 - d. Clearly, conspicuously and plainly states:
 - i. The services to be performed by the motor vehicle dealer and the terms and conditions of such performance;
 - ii. The service fee or deductible charge, if any, to be charged, or applied, for each covered repair;
 - iii. Each of the systems and components covered by the contract;

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- iv. The period during which the contract will remain in effect;
 - v. All limitations respecting the performance of services, including any restrictions as to time periods when services may be required or will be performed;
 - vi. The cost of the service contract;
 - vii. Those specific items or components which are excluded from coverage in large bold type;
 - viii. The conditions, if any, under which the service contract or coverage may be reinstated after coverage has been voided by acts or omissions by the service contract holder;
 - ix. The material acts or omissions by the contract holder which cancel or void coverage;
4. No service contract shall be approved if:
- a. The coverage may be cancelled or voided due to acts or omissions of the motor vehicle dealer, its assignees or subcontractors for their failure to provide correct information or their failure to perform the services or repairs promised in a timely, competent, and workmanlike manner;
 - b. Parts or components repaired or replaced under the service contract are excluded;
 - c. The contract can be cancelled or voided by the administrator, insurer or its representatives for reasons which are within the knowledge and/or control of the motor vehicle dealer including but not limited to:
 - i. Pre-existing conditions;
 - ii. Prior use or the odometer has been tampered with prior to purchase;
 - iii. Misrepresentation by either the motor vehicle dealer or its subcontractors;
 - iv. Ineligibility for the program, including gray market, high performance and GM diesel autos.
- E. Disapproval of contracts, applications or advertising. The director may refuse to approve or disapprove program or advertising material that is in violation of this Rule by issuing an order specifying in what respect the motor vehicle service contract program or advertising material violates this Rule. Any person aggrieved by such an order can demand a hearing thereon in accordance with A.R.S. § 20-1095.09.
- F. Motor vehicle dealer's notice of intent. The motor vehicle dealer's notice of intent required by A.R.S. § 20-1095.07(B) shall be certified by an individual having authority to represent the dealer and shall include the following information:
- 1. The dealer's name, address and dealer's license number;
 - 2. The name of the administrator;
 - 3. The name or other identification of each motor vehicle service contract program which it intends to sell;
 - 4. The name of the insurer(s), the policy number(s) and the expiration date(s) of its mechanical reimbursement policy or bond;
 - 5. Confirmation that the dealer will notify the director by certified mail prior to effecting any change in the information provided in its notice of intent. The notice of intent shall be continuous until withdrawn or amended by the motor vehicle dealer.

Historical Note

Former Section R4-14-408 renumbered as Section R4-14-409; a new Section R4-14-408 adopted effective July 15, 1987 (Supp. 87-3). R20-6-408 recodified from R4-14-408 (Supp. 95-1).

R20-6-409. Hospital, Medical, Dental, and Optometric Ser-**vice Corporations**

- A. Applicability. This rule applies to all subscription contracts issued by hospital, medical, dental and optometric service corporations.
- B. Subscription contract provision. Subscription contracts of hospital, medical, dental and optometric service corporations subject to the provisions of Article 3, Chapter 4 of Title 20, A.R.S., shall meet the requirements of the following rules:
 - 1. R20-6-201. Advertisements of disability insurance.
 - 2. R20-6-209. Unfair sex discrimination.
 - 3. R20-6-210. Group coverage discontinuance and replacement.
 - 4. R20-6-213. Unfair discrimination on the basis of blindness, partial blindness, or physical disability.
 - 5. R20-6-216. Life and disability insurance policy language simplification.
 - 6. R20-6-302. Valuation of reserves for disability policies.
 - 7. R20-6-606. Medicare supplement insurance disclosure and minimum standards.
 - 8. R20-6-607. Reasonableness of benefits in relation to premium charged.
- C. Severability. If any provision of this rule or the application thereof to any person or circumstance is for any reason held invalid, the remainder of the rule and the application of such provision to other persons or circumstances shall not be affected thereby.

Historical Note

Adopted effective July 9, 1982 (Supp. 82-4). Former Section R4-14-408 renumbered without change as Section R4-14-409 effective July 15, 1987 (Supp. 87-3). R20-6-409 recodified from R4-14-409 (Supp. 95-1).

ARTICLE 5. THE INSURANCE CONTRACT**R20-6-501. Ten-day Period to Examine Disability Insurance Policy**

For the purpose of implementing A.R.S. §§ 20-442, 20-443, 20-826, 20-1111 and 20-1113 and to make more specific the regulation therein provided relative to policies of individual disability insurance (accident and sickness, hospitalization, medical, surgical and loss of time) issued in the State of Arizona and further to provide satisfactory public remedy against the hazards of misunderstanding by an applicant, of deception and coercion by an agent and of certain policy exclusions and limitations that cheapen the value of coverage, the Insurance Department of Arizona adopts the following rule:

- 1. Each policy of individual disability insurance, except one for which no provision for renewal is made, issued for delivery in the State of Arizona on or after October 1, 1961, by an insurance company or by a hospital or medical service corporation shall have printed on the first page thereof or attached thereto or endorsed thereupon in prominent style a notice declaring that, during a period of 10 days (or, at the insurer's option, a longer period) from the date of delivery to the policyholder, such policy may be returned for cancellation to the insurer at its home office (or, at the insurer's option, to its branch office or to the agent through whom it was purchased) and declaring further that in the event of such return the insurer will refund the entirety of any premium paid therefor, including any policy fees or other charges, and that the policy shall be deemed void from the beginning and that the parties shall be returned to their original position as if no policy had been issued.
- 2. The Insurance Department does not specify the particular language the notice shall contain but prefers usage of a

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phraseology approximately along the lines of either the longer (Form A) or shorter (Form B) sample below:

Sample Form A**NOTICE OF TEN-DAY RIGHT TO EXAMINE POLICY**

The _____ Insurance Company urges you to read this policy carefully and trusts that upon doing so you will fully understand, and will be pleased with, its coverage. If, however, questions arise or information is desired, do not hesitate to consult the selling agent. In addition, should the policy for any reason be unsatisfactory, by surrendering it within ten days following receipt to our office at _____ or to the selling agent, immediately full premium will be refunded and the policy will be cancelled and deemed void and as never in force and effect.

Sample Form B**IMPORTANT NOTICE**

If for any reason this policy is unsatisfactory, it may be returned for cancellation within ten days following receipt – in which case the entire premium will be refunded.

Historical Note

Former General Rule 61-7. R20-6-501 recodified from R4-14-501 (Supp. 95-1).

ARTICLE 6. TYPES OF INSURANCE CONTRACTS**R20-6-601. Regulations Governing Bail Transactions****A. General provisions**

1. Effective date
 - a. These regulations are effective November 1, 1960. On and after date, no bail transaction or severable portion thereof shall be conducted, directly or indirectly except in full conformity herewith.
 - b. No surety insurer shall furnish for use and no bail bond agent shall use any forms or documents which contain any provisions contrary to these regulations on or after the effective date hereof.
2. Authority. Authority for these regulations is A.R.S. §§ 20-142, 20-143 and 20-257 and A.R.S. Chapter 2, Article 3.
3. Public interest served. These regulations serve the public interest by prohibiting inequities in bail transactions and by establishing standards of licensing and conduct for bail bond agents.
4. Regulations as severable. These regulations shall be construed as severable, such that, where one or more Sections are held invalid, such remaining Sections will not be adversely affected.
5. Penalty. Violation of these regulations will subject the guilty party to the penalties of A.R.S. §§ 20-114, 20-220 and 20-316 and to the enforcement procedures of A.R.S. §§ 20-152 and 20-160 through 20-166.

B. Definitions

1. "Bail transaction" defined. As used in these regulations, the term "bail transaction" includes solicitation and inducement, preliminary negotiation and effectuation of a contract of surety insurance and the transaction of matters subsequent thereto and arising therefrom – all in connection with the release of persons arrested or confined.
2. "Bail bond agent" defined. As used in these regulations, the term "bail bond agent" means any person who engages in a bail transaction on behalf of a surety insurer or representative thereof.
3. "Arrestee" defined. As used in these regulations, the term "arrestee" means any person arrested or detained whose release on bail is solicited or procured or concerning whose release negotiations are commenced.

4. "Director" defined. As used in these regulations, the term "Director" means the Director of Insurance of the state.

C. Licensing

1. Application for license. Each application for original or renewal license as a bail bond agent shall be on a form furnished by the Director, and each applicant for such license shall furnish such supplementary information and supporting statements as the Director may require.
2. Prohibited associations. A bail bond license shall not be issued to, renewed for or maintained by any person who associates regularly with criminals, gamblers or persons of poor repute – except to the extent such association is required by business or professional duty and responsibility.
3. Transactions by unlicensed persons prohibited. No bail bond agent shall directly or indirectly permit any person on his behalf to solicit or negotiate bail transactions unless such person is duly licensed by the Director.
4. Employees. Employees of bail bond agents performing only clerical duties need not be licensed hereunder and shall be deemed not engaged in bail transactions.

D. Conduct of bail bond agents

1. Disclosure of business. Every bail bond agent shall conduct his business in such a manner that the public and those dealing with him shall be aware of the capacity in which he is acting.
2. Control of employees. A bail bond agent shall exercise direct supervision over his employees and keep informed of their actions as his employees.
3. Prohibited employees. No bail bond agent shall have in his employ at any time any criminal, gambler or person of poor repute.
4. Acting for attorney. No bail bond agent shall receive, or collect for an attorney any money or other item of value for attorney's fee, costs or any other purpose on behalf of an arrestee, unless a receipt is given therefor.
5. Informants prohibited. No bail bond agent shall for any purpose, directly or indirectly, enter into an arrangement of any kind or have an understanding with a law enforcement officer, with a newspaper employee, with a messenger service or employee thereof, with a trusty in a jail, with other person incarcerated in a jail, or with any person whatever, to inform or notify any bail bond agent directly or indirectly of:

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- a. The existence of a criminal complaint;
 - b. The fact of an arrest; or
 - c. The fact that an arrest of any person is pending or contemplated; or
 - d. Any information pertaining to matters set forth in (a), (b), and (c) hereof or to the persons involved therewith.
6. Compliance with rules of public authority. No bail bond agent shall solicit any person in a bail transaction in a prison or jail or other place of detention, court or public institution connected with the administration of justice unless said bail bond agent has fully complied with every rule, regulation and ordinance issued by each public authority governing the conduct of persons in or about said premises.
 7. Representations to public authority
 - a. No bail bond agent shall make any misleading or untrue representation to a court or to a public official with respect to a bail transaction, nor for the purpose of avoiding or preventing a forfeiture of bail or of having set aside a forfeiture which has occurred.
 - b. Every bail bond agent shall truthfully and fully answer every question asked him by the Director or his representative respecting his bail transactions and matters relating to the conduct of his bail business. Any bail bond agent may have his attorney present when he answers any such question.
 8. Maintenance of records. Every bail bond agent shall keep complete records of all business done under authority of his license. Such records shall be open to inspection or examination by the Director or his representatives at all reasonable times at the principal place of business of the bail bond agent as designated in his license.
- E. Charges, collateral, refunds and rebates
1. Rates
 - a. No bail bond agent shall issue or deliver a bail bond except at the premium rates most recently filed and approved by the Director in accordance with A.R.S. § 20-357.
 - b. Every bail bond agent shall post the premium rates of the surety insurer he represents in a conspicuous manner at his place of business.
 2. Charges permitted. No bail bond agent shall, in any bail transaction or in connection therewith, directly or indirectly, charge or collect money or other valuable consideration from any person except for the following purposes:
 - a. To pay the premium at the rates established by the surety insurer and approved by the Director.
 - b. To provide collateral.
 - c. To reimburse himself for actual and reasonable expenses incurred in connection with the individual bail transaction, including:
 - i. Guard fees after the first 12 hours following release of an arrestee on bail;
 - ii. Notary fees, recording fees, necessary long distance telephone expenses, telegram charges, and travel expenses for other than local community travel.
 - iii. Any other actual expenditure necessary to the bail transaction which is not usually and customarily incurred in connection with the ordinary operation and conduct of bail transactions.
 3. Delivery of documents to arrestee
 - a. Every bail bond agent shall, at the time of obtaining the release of an arrestee on bail or immediately thereafter, deliver to such arrestee or to the principal person with whom negotiations were made, if other than the arrestee, a copy of the bail bond premium agreement, which shall include:
 - i. The name of the surety insurer and the name and business address of the bail bond agent.
 - ii. The amount of bail and the premium thereof.
- b. The bail bond agent shall also deliver at such time a statement detailing all charges in addition to the premium, the amount received on account, the unpaid balance if any, and a description of and a receipt for any collateral received.
4. Collateral
 - a. Any bail bond agent who receives collateral in connection with a bail transaction shall do so in a fiduciary capacity and, prior to any forfeiture of bail, shall keep such collateral separate and apart from any other funds, assets or property of such bail bond agent.
 - b. Any collateral received shall be returned to the person who deposited it with the bail bond agent or any assignee as soon as the obligation, the satisfaction of which was secured by the collateral, is discharged. Where such collateral has been deposited to secure the obligation of a bond, it shall be returned immediately upon the entry of any order by an authorized official by virtue of which liability under the bond is terminated, or, if any bail bond agent fails to cooperate fully with any authorized official to secure the termination of such liability, immediately upon the accrual of any right to secure an order of termination of liability.
 - c. When such collateral has been deposited as security for unpaid premium or charges and, if such premium or charges remained unpaid at the time of exoneration and after demand therefor has thereafter been made by the bail bond agent, collateral other than cash may be levied upon in the manner provided by law and cash collateral up to the amount of such unpaid premium on charges may be applied in payment thereof.
 - d. If collateral received by a bail bond agent is in excess of the bail forfeited, such excess shall be returned to the depositor immediately upon application of the collateral to the forfeiture subject, however, to any claim of the bail bond agent for unpaid premium or charges as provided in subparagraph (c) of paragraph (4) of subsection (E), or as agreed to in writing by the bail bond agent and arrestee or his indemnitor.
 5. Premium refund upon surrender of arrestee. No bail bond agent shall surrender an arrestee to custody prior to the time specified in the bail bond for the appearance of the arrestee, or prior to any other occasion when the presence of the arrestee in court is lawfully required, without returning all premium paid therefor, unless as a result of judicial action, or material misrepresentation by the arrestee or his indemnitor with respect to the execution of the bail bond agreement, or a material and substantial increase in the hazard assumed. Failure of the arrestee to pay the premium, or charges permitted under these regulations or any part thereof, and failure to furnish collateral required by the bail bond agent, shall not be considered a material and substantial increase in the hazard assumed.
 6. Rebating prohibited. No bail bond agent shall pay or allow in any manner, directly or indirectly, to any person

who is not also a bail bond agent any commission or valuable consideration on or in connection with a bail transaction. This Section shall not prohibit payments by a bail bond agent to an unlicensed person of charges by such persons for services of the kind specified in paragraph (2) subsection (E) of this Section.

Historical Note

Former General Rule 60-5. R20-6-601 recodified from R4-14-601 (Supp. 95-1).

R20-6-602. Nationwide Inland Marine Definition

- A.** Applicability. This rule applies to risks and coverages which may be classified or identified as Marine, Inland Marine or Transportation insurance but shall not be construed to mean that the kinds of risks and coverages are solely Marine, Inland Marine or Transportation insurance in all instances. This rule shall not be construed to restrict or limit in any way the exercise of any insuring powers granted under charters and license whether used separately, in combination or otherwise.
- B.** Marine and/or transportation policies may cover under the following conditions:
1. Imports.
 - a. Imports may be covered wherever the property may be and without restriction as to time, provided the coverage of the issuing companies includes hazards of transportation.
 - b. An import, as a proper subject of marine or transportation insurance, shall be deemed to maintain its character as such so long as the property remains segregated in such a way that it can be identified and has not become incorporated and mixed with the general mass of property in the United States, and shall be deemed to have been completed when such property has been:
 - i. Sold and delivered by the importer, factor or consignee; or
 - ii. Removed from place of storage and placed on sale as part of the importer's stock in trade at a point of sale or distribution; or
 - iii. Delivered for manufacture, processing or change in form to premises of the importer or of another for any such purposes.
 2. Exports.
 - a. Exports may be covered wherever the property may be located without restriction as to time, provided the coverage of each issuing company includes hazards of transportation.
 - b. An export, as a proper subject of marine or transportation insurance, shall be deemed to acquire its character as such when designated or while being prepared for export and retain that character unless diverted for domestic trade, and when so diverted, the provisions of this rule respecting domestic shipments shall apply, provided, however, that this provision shall not apply to long established methods of insuring certain commodities, e.g., cotton.
 3. Domestic shipments.
 - a. Domestic shipments on consignment, for sale or distribution, exhibit, or trial, or approval or auction, while in transit, while in the custody of others and while being returned, provided the coverage of each issuing company includes hazards of transportation, and further provided that in no event shall the policy cover domestic shipments on consignment on premises owned, leased or operated by the consignor.
 - b. Domestic shipments not on consignment, provided the coverage of the issuing companies includes hazards of transportation, beginning and ending within the United States, and further provided that such shipments shall not be covered at manufacturing premises nor after arrival at premises owned, leased or operated by assured or purchaser.
 4. Bridges, tunnels and other instrumentalities of transportation and communication excluding buildings, their improvements and betterments, their furniture and furnishings, fixed contents and supplies held in storage. The foregoing includes:
 - a. Bridges, tunnels, other similar instrumentalities, including auxiliary facilities and equipment attendant thereto.
 - b. Piers, wharves, docks, slips, dry docks and marine railways.
 - c. Pipelines, including on-line propulsion, regulating and other equipment appurtenant to such pipelines, but excluding all property at manufacturing, producing, refining, converting, treating or conditioning plants.
 - d. Power transmission and telephone and telegraph lines, excluding all property at generating, converting or transforming stations, substations and exchanges.
 - e. Radio and television communication equipment in use as such including towers and antennae with auxiliary equipment, and appurtenant electrical operating and control apparatus.
 - f. Outdoor cranes, loading bridges and similar equipment used to load, unload and transport.
 5. Personal Property Floater Risks covering individuals and/or generally
 - a. Personal Effects Floater Policies
 - b. The Personal Property Floater
 - c. Government Service Floater
 - d. Personal Fur Floaters
 - e. Personal Jewelry Floaters
 - f. Wedding Present Floaters for not exceeding 90 days after the date of the wedding.
 - g. Silverware Floaters.
 - h. Fine Arts Floaters, covering paintings, etchings, pictures, tapestries, art glass windows, and other bona fide works of art of rarity, historical value or artistic merit.
 - i. Stamp and Coin Floaters.
 - j. Musical Instrument Floaters. Radios, televisions, record players and combinations thereof are not deemed musical instruments.
 - k. Mobile Articles, Machinery and Equipment Floaters, excluding vehicles designed for highway use and auto homes, trailers and semi-trailers except when hauled by tractors not designed for highway use, covering identified property of a mobile or floating nature pertaining to or usual to a household. Such policies shall not cover furniture and fixtures not customarily used away from premises where such property is usually kept.
 - l. Installment Sales and Leased Property Policies covering property pertaining to a household and sold under conditional contract of sale, partial payment contract or installment sales contract or leased, but excluding motor vehicles designed for highway use. Such policies must cover in transit but shall not

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- extend beyond the termination of the seller's or lessor's interest.
- m. Live Animal Floaters.
6. Commercial Property Floater Risks covering property pertaining to a business, profession or occupation.
- a. Radium Floaters.
- b. Physicians' and Surgeons Instrument Floaters. Such policies may include coverage of such furniture, fixtures and tenant assured's interest in such improvements and betterments of buildings as are located in that portion of the premises occupied by the assured in the practice of his profession.
- c. Pattern and Die Floaters.
- d. Theatrical Floaters, excluding buildings and their improvements and betterments, and furniture and fixtures that do not travel about with theatrical troupes.
- e. Film Floaters, including builders' risk during the production and coverage on completed negatives and positives and sound records.
- f. Salesmen's Samples Floaters.
- g. Exhibition Policies on property while on exhibition and in transit to or from such exhibitions.
- h. Live Animal Floaters.
- i. Builders Risks and/or Installation Risks covering interest of owner, seller or contractor, against loss or damage to machinery, equipment, building materials or supplies, being used with and during the course of installation, testing, building, renovating or repairing. Such policies may cover at points or places where work is being performed, while in transit and during temporary storage or deposit, of property designated for and awaiting specific installation, building, renovating or repairing.
- i. Such coverage shall be limited to Builders Risks or Installation Risks where Perils in addition to Fire and Extended Coverage are to be insured.
- ii. If written for account of owner, the coverage shall cease upon completion and acceptance thereof; or if written for account of a seller or contractor the coverage shall terminate when the interest of the seller or contractor ceases.
- j. Mobile Articles, Machinery and Equipment Floaters, excluding motor vehicles designed for highway use and auto homes, trailers and semi-trailers except when hauled by tractors not designed for highway use and snow plows constructed exclusively for highway use covering identified property of a mobile or floating nature, not on sale or consignment, or in course of manufacture, which has come into the custody or control of parties who intend to use such property for the purpose for which it was manufactured or created. Such policies shall not cover furniture and fixtures not customarily used away from premises where such property is usually kept.
- k. Property in transit to and from and in custody of bailees not owned, controlled or operated by the bailor. Such policies shall not cover bailee's property at his premises.
- l. Installment sales and leased property. Policies covering property sold under conditional contract of sale, partial payment contract, installment sales contract, or leased but excluding motor vehicles designed for highway use. Such policies must cover
- in transit but shall not extend beyond the termination of the seller's or lessor's interest. This Section is not intended to include machinery and equipment under certain "lease-back" contracts.
- m. Garment Contractors Floaters.
- n. Furriers or Fur Storer's Customer's Policies, i.e., policies under which certificates or receipt are issued by furriers or fur storers covering specified articles the property of customers.
- o. Accounts Receivable Policies, Valuable Papers and Records Policies.
- p. Floor Plan Policies, covering property for sale while in possession of dealers under a Floor Plan or any similar plan under which the dealer borrows money from a bank or lending institution with which to pay the manufacturer, provided:
- i. Such merchandise is specifically identifiable as encumbered to the bank or lending institution.
- ii. The dealer's right to sell or otherwise dispose of such merchandise is conditioned upon its being released from encumbrance by the bank or lending institution.
- iii. That such policies cover in transit and do not extend beyond the termination of the dealer's interest.
- iv. That such policies shall not cover automobiles or motor vehicles; merchandise for which the dealer's collateral is the stock or inventory as distinguished from merchandise specifically identifiable as encumbered to the lending institution.
- q. Sign and Street Clock Policies, including neon signs, automatic or mechanical signs, street clocks, while in use as such.
- r. Fine Arts Policies covering paintings, etchings, pictures, tapestries, art glass windows, and other bona fide works of art of rarity, historical value or artistic merit, for account of museums, galleries, universities, businesses, municipalities and other similar interests.
- s. Policies covering personal property which, when sold to the ultimate purchaser, may be covered specifically, by the owner, under Inland Marine Policies including:
- i. Musical Instrument Dealers Policies, covering property consisting principally of musical instruments and their accessories. Radios, televisions, record players and combinations thereof are not deemed musical instruments.
- ii. Camera Dealers Policies, covering property consisting principally of cameras and their accessories.
- iii. Furrier's Dealers Policies, covering property consisting principally of furs and fur garments.
- iv. Equipment Dealers Policies, covering mobile equipment consisting of binders, reapers, tractors, harvesters, harrows, tedders and other similar agricultural equipment and accessories therefor; construction equipment consisting of bulldozers, road scrapers, tractors, compressors, pneumatic tools, and similar equipment and accessories therefor; but excluding motor vehicles designed for highway use.
- v. Stamp and Coin Dealers covering property of philatelic and numismatic nature.
- vi. Jewelers' Block Policies.

- vii. Fine Arts Dealers.
Such policies may include coverage of money in locked safes or vaults on the Assured's premises. Such policies also may include coverage of furniture, fixtures, tools, machinery, patterns, molds, dies and tenant insureds interest in improvements of buildings.
- t. Wool Growers Floaters.
- u. Domestic Bulk Liquids Policies, covering tanks and domestic bulk liquids stored therein.
- v. Difference in Conditions Coverage excluding fire and extended coverage perils.
- w. Electronic Data Processing Policies.

- C. Unless otherwise permitted, nothing in the foregoing shall be construed to permit MARINE OR TRANSPORTATION POLICIES TO COVER:
1. Storage of assured's merchandise, except as hereinbefore provided.
 2. Merchandise in course of manufacture, the property of and on the premises of the manufacturer.
 3. Furniture and fixtures and improvements and betterments to buildings.
 4. Monies and/or securities in safes, vaults, safety deposit vaults, bank or assured's premises, except while in course of transportation.

Historical Note

Former General Rule 59-4; Amended effective August 30, 1985 (Supp. 85-4). R20-6-602 recodified from R4-14-602 (Supp. 95-1).

R20-6-603. Repealed

Historical Note

Former General Rule 69-18; Repealed effective July 27, 1981 (Supp. 81-4). R20-6-603 recodified from R4-14-603 (Supp. 95-1).

R20-6-604. Definitions

The definitions in A.R.S. § 20-1603 and this Section apply to R20-6-604 through R20-6-604.10.

"Actual loss ratio" means incurred claims divided by earned premiums at rates in use.

"Actuarially equivalent" means of equal actuarial present value determined as of a given date with each value based on the same set of actuarial assumptions. When used in this Article in reference to rates and coverage, "actuarially equivalent" means a rate or coverage that is actuarially determined to yield loss ratios of 50% for credit life insurance and 60% for credit disability insurance.

"Credit insurance" means credit life insurance, credit disability insurance, or both, but does not include any insurance for which there is no identifiable charge.

"Earned premiums" means earned premiums at prima facie rates and earned premiums at rates in use.

"Earned premiums at prima facie rates" means an insurer's actual earned premiums, adjusted to the amount that the insurer would have earned if the insurer's premium rates had equaled the prima facie rates in effect during the experience period.

"Earned premiums at rates in use" means the premiums that an insurer actually earns on the premium rates the insurer charges during an experience period.

"Evidence of individual insurability" means information about a debtor's health status or medical history that a debtor provides as a condition of credit insurance becoming effective.

"Experience" means an insurer's earned premiums and incurred claims during an experience period.

"Experience period" means a period of time for which an insurer reports income and expense information on the insurer's credit insurance business.

"Final adjusted rates" means the prima facie rates referred to in R20-6-604.04 and R20-6-604.05, subject to any deviations approved under R20-6-604.08.

"Gross debt" means the sum of the remaining payments that a debtor owes a creditor.

"Identifiable charge" means a charge for credit insurance that is imposed on a debtor with credit insurance but not on a debtor without credit insurance, and includes a charge for insurance that is disclosed in the credit or other financial instrument furnished to the debtor, which sets forth the financial elements of a credit transaction, and any difference in finance, interest, service charges, or other similar charges made to a debtor in like circumstances except for the debtor's status as insured or noninsured.

"Incurred claims" means the total claims an insurer pays during an experience period, adjusted for the change in the claim reserves.

"Net debt" means the amount necessary to liquidate a debt in a single lump-sum payment excluding unearned interest and other unearned finance charges.

"Plan of credit insurance" means an insurance plan based on one of the following rate and coverage categories:

Credit life insurance, other than on revolving accounts, including joint and single life coverage, decreasing and level insurance, and outstanding balance and single premium;

Credit life insurance on revolving accounts;

Credit life insurance on an age-graded basis;

Credit disability insurance, other than on revolving accounts, including outstanding balance and single premium, and each combination of waiting period and retroactive or non-retroactive benefits;

Credit disability insurance on revolving accounts, including each combination of waiting period and retroactive or non-retroactive benefits.

"Preexisting condition" means a condition:

For which a debtor received medical advice, consultation, or treatment within six months before the effective date of credit insurance coverage; and

From which the debtor dies, in the case of life insurance, or becomes disabled, in the case of disability insurance, within six months after the effective date of coverage.

"Prima facie adjusted loss ratio" means incurred claims divided by earned premiums at prima facie rates.

"Prima facie rates" means the rates established by the Director as prescribed in R20-6-604.03.

"Reasonableness standard" means the requirement in A.R.S. § 20-1610(B) that an insurer's premiums for credit insurance

shall not be excessive in relation to the benefits provided under the policy.

“Rule of Anticipation” means the product of the gross single premium per \$100 of indebtedness for a debtor’s remaining term of indebtedness, times the number of hundreds of dollars of remaining indebtedness.

Historical Note

Former General Rule 70-22; Correction, original publication did not include Exhibit C (Supp. 76-1). Amended effective January 8, 1980 (Supp. 80-1). Former Section R4-14-604 repealed, new Section R4-14-604 adopted effective April 1, 1982. See subsection (N) for further detail (Supp. 82-2). Amended subsection (N) and Exhibit A effective March 30, 1983 (Supp. 83-2). R20-6-604 recodified from R4-14-604 (Supp. 95-1). Section repealed; new Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

Exhibit A. Repealed

Historical Note

Former General Rule 70-22; Correction, original publication did not include Exhibit C (Supp. 76-1). Amended effective January 8, 1980 (Supp. 80-1). Former Section R4-14-604 repealed, new Section R4-14-604 adopted effective April 1, 1982. See subsection (N) for further detail (Supp. 82-2). Amended subsection (N) and Exhibit A effective March 30, 1983 (Supp. 83-2). R20-6-604 recodified from R4-14-604 (Supp. 95-1). Section repealed by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.01. Rights and Treatment of Debtors

A. Creditor Obligations.

1. Multiple plans of insurance. If a creditor makes more than one plan of credit insurance available to debtors, the creditor shall inform each debtor of each plan for which the debtor is eligible and of the premium and charges for each plan.
2. Substitution. If a creditor requires a debtor to have credit insurance as additional security for a debt, the creditor shall inform the debtor in writing of the debtor’s right to obtain alternative coverage as prescribed in A.R.S. § 20-1614 before the loan transaction is completed.
3. Remittance of premiums. If a creditor adds an insurance charge or premium to a debt, the creditor shall remit the insurance charge or premium to the insurer within 60 days after it is added to the debt.

B. Creditor and insurer obligations regarding insurance on refinanced debt.

1. If a debt is discharged because the debtor refinances the debt before the scheduled maturity date, the creditor shall notify the insurer that issued the credit insurance on the discharged debt.
2. An insurer shall not issue any credit insurance that covers the refinanced debt with an effective date preceding the termination date of the insurance on the original debt.
3. The insurer issuing the coverage on the discharged debt shall refund to or credit the debtor with all unearned insurance charges or premium according to R20-6-604.06.
4. If a debt is refinanced, the effective date of the policy provisions in any new insurance covering the refinanced debt shall be the first date on which the debtor became insured under the previous policy. An insurer may apply any new exclusion period or preexisting condition limita-

tion only to the portion of the new loan that exceeds the previous loan.

C. Required policy provisions.

1. Termination provisions for group policies. A group credit insurance policy shall provide for continued coverage of debtors covered under the policy if the policy terminates, as follows:
 - a. For a policy with a single premium payment, or any other payment method that prepays coverage for more than one month, a provision requiring continued insurance coverage for the entire period for which the premium has been paid; and
 - b. For a policy with a monthly premium payment, a provision requiring the insurer to send the debtor a termination notice at least 30 days before the effective date of termination, unless an insurer is issuing replacement coverage in at least the same amount, without lapse of coverage.
 2. Maximum aggregate provisions. A provision in an individual policy or group certificate that sets a maximum limit on total claim payments shall apply only to that individual policy or group certificate.
- ##### D. Creditor and insurer obligations when debtor prepays debt.
1. Except as provided in subsection (D)(2), if a debtor prepays a debt in full, any credit insurance covering the debt shall terminate on the date of prepayment. The creditor and insurer shall refund to or credit the debtor with any unearned premium according to R20-6-604.06.
 2. If a debt is fully prepaid because of the debtor’s death or any other lump-sum credit insurance payment, a creditor or insurer is not required to refund premium for the coverage under which the lump sum was paid.
 3. If a claim under credit disability coverage is in progress at the time of prepayment, the insurer:
 - a. May calculate the refund as if the prepayment did not occur until the end of the period for payment of benefits, and
 - b. Is not required to refund premiums for any period for which credit disability benefits are payable.
- ##### E. Benefits payable on revolving account. If a debtor is paying for credit insurance coverage on a revolving account and dies, the insurer shall pay a benefit amount equal to the amount of indebtedness outstanding on the date of death. The insurer may exclude preexisting conditions occurring within six months of any advance on the revolving account, running separately for each advance or charge.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.02. Satisfying the Reasonableness Standard

- A. An insurer shall comply with all requirements of A.R.S. § 20-1610 regarding premium and insurance charges.
- B. An insurer may satisfy the reasonableness standard in A.R.S. § 20-1610(B) if the insurer’s premium rate develops a loss ratio of not less than 50% for credit life insurance and not less than 60% for credit disability insurance.
- C. While in effect, the rates described in R20-6-604.04 and R20-6-604.05, subject to any deviations approved under R20-6-604.08 are conclusively presumed to develop the loss ratios described in subsection (B). For purposes of prospective effect, the Department may rebut this presumption by disapproving or withdrawing approval for the rates as prescribed in A.R.S. § 20-1610.

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- D.** An insurer may provide coverage other than the standard coverage described in R20-6-604.04 and R20-6-604.05. An insurer that wishes to provide nonstandard coverage shall:
1. File the nonstandard coverage policy information as prescribed in A.R.S. § 20-1609, and
 2. Demonstrate that the rates for the coverage are reasonably expected to develop a loss ratio of not less than 50% for credit life insurance and not less than 60% for credit disability insurance.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.03. Determination of Prima Facie Rates

- A.** The Director shall, by order, establish prima facie rates as prescribed in this Section.
- B.** At least once every three years, the Director shall:
1. Determine the rate of expected claims on a statewide basis;
 2. Compare the rate of expected claims with the rate of actual claims for the past three years determined from the incurred claims and earned premiums at prima facie rates; and
 3. If the Director determines that the prima facie rates require adjustment, issue a notice of hearing and proposed order adjusting the actual statewide prima facie rates. The hearing date on the proposed order shall be no earlier than 45 days from the date of the notice.
- C.** The Director shall mail a copy of the notice and proposed order to:
1. Each insurer that reported transaction of credit insurance on its annual statement immediately preceding the date of the notice, and
 2. Any other person who sends the Director a written request for notice of proceedings to adjust the prima facie rates.
- D.** Any person may submit written comments to the Director or appear at the hearing and provide oral comments on the record. Written comments shall be received no later than the close of record date specified in the notice of hearing.
- E.** The Director shall:
1. Consider written and oral comments; and
 2. Issue a final order setting prima facie rates no later than 30 days after the close of record date specified in the notice of hearing.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.04. Credit Life Insurance Rates and Provisions

- A.** Under the process prescribed in R20-6-604.03, the Director shall issue an order establishing prima facie rates for credit life insurance.
- B.** The Department shall presume that an insurer meets the loss ratios prescribed in R20-6-604.02(B) if the insurer uses the prima facie rates, subject to the requirements in this Section and R20-6-604.08. An insurer may use the prima facie rates without filing additional actuarial support.
- C.** A credit life insurance policy shall meet the requirements listed in this Section. The policy shall:
1. Provide coverage for death, by whatever means caused, to all eligible debtors, with or without evidence of individual insurability for debtors that purchase coverage within 30 days of being eligible;
 2. Have no exclusions other than for:

- a. Suicide within six months after the effective date of coverage, or
 - b. A preexisting condition;
3. Have no age restrictions, except the following permissible exclusions:
- a. An age restriction providing that no insurance will become effective on a debtor on or after the attainment of age 70 and that all insurance shall terminate on a debtor attaining age 70; and
 - b. An age restriction for a revolving credit life insurance policy that:
 - i. Excludes a class of debtors determined by age, or
 - ii. Provides for termination of insurance or reduction in the amount of insurance when a debtor reaches age 70; and
4. For insurance on revolving accounts, have the date on which an advance or charge occurs as the effective date of coverage for each part of the insurance attributable to a different advance or a charge to the plan account. Any exclusion period or preexisting condition limitation shall run separately for each advance or charge.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.05. Credit Disability Insurance Rates and Provisions

- A.** Under the process prescribed in R20-6-604.03, the Director shall issue an order establishing prima facie rates for credit disability insurance.
- B.** The Department shall presume that an insurer meets the loss ratios prescribed in R20-6-604.02(B) if the insurer uses the prima facie rates, subject to the requirements in this Section and R20-6-604.08. An insurer may use the prima facie rates without filing additional actuarial support.
- C.** A credit disability insurance policy shall meet the requirements listed in this Section. The policy shall:
1. Provide coverage for disability, by whatever means caused, to all eligible debtors, with or without evidence of individual insurability for debtors that purchase coverage within 30 days of becoming eligible;
 2. Include a definition of disability that is no more restrictive than the following:
 - a. For the first 12 months of disability, the inability of the insured to perform the essential functions of the insured's occupation; and
 - b. After the first 12 months of disability, the inability of the insured to perform the essential functions of any occupation for which the insured is reasonably suited by virtue of education, training, or experience;
 3. Not include any employment requirement that a debtor be employed more than full-time on the effective date of coverage, with a definition of "full-time" as a regular work week of at least 30 hours;
 4. Have no exclusions other than for disabilities resulting from:
 - a. Normal pregnancy,
 - b. Intentionally self-inflicted injury, or
 - c. A preexisting condition;
 5. For insurance on revolving accounts, have the date on which an advance or charge occurs as the effective date of coverage for each part of the insurance attributable to a different advance or a charge to the plan account. Any

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exclusion period or preexisting condition limitation shall run separately for each advance or charge;

6. Have no age restrictions, except the following permissible exclusion:
An age restriction providing that no insurance will become effective on a debtor on or after the attainment of age 65 and that all insurance shall terminate on a debtor attaining age 66; and
7. Include a provision for a daily benefit of not less than one-thirtieth of the monthly benefit payable under the policy.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.06. Refund Methods

- A. When refunding premiums as prescribed in A.R.S. § 20-1611, an insurer shall use the following methods:
 1. For insurance paid by a single premium, the Rule of Anticipation method; and
 2. For insurance paid by other than a single premium, a method that refunds at least the pro rata gross unearned amount charged to the debtor.
- B. The Director may approve other refund methods similar to those described in subsection (A), that are actuarially equivalent to the type of coverage the debtor purchased.
- C. An insurer's refund method may recognize adjustments to a daily basis for interest or payments if the adjustments are consistent with the underlying credit transaction.
- D. An insurer is not required to refund any amount less than \$5.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.07. Experience Reports

- A. By April 1 of each year, an insurer that transacts credit insurance in this state shall file with the Director an experience report, on a form specified by the Director, for each class of business that the insurer transacts as provided in this Section.
 1. In this Section, a "class of business" means:
 - a. Credit unions;
 - b. Banks, savings and loan institutions, and mortgage companies;
 - c. Finance companies, small loan companies, and consumer lenders defined in A.R.S. § 6-601(5);
 - d. Dealers, including auto, truck, and boat dealers, retail stores, and other persons selling financed goods; and
 - e. All other persons selling credit insurance not specifically listed in subsection (A)(1)(a) through (d).
 2. The report shall include the following information:
 - a. Mode of premium payment,
 - b. Plan of benefits description,
 - c. Earned premiums,
 - d. Incurred claims,
 - e. Loss ratios, and
 - f. For credit life insurance, mean insurance in force.
- B. For each day a report is late, the Director may assess a penalty as prescribed in A.R.S. § 20-223.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.08. Use of Prima Facie Rates; Rate Deviations

- A. Use of rates greater than prima facie rates. An insurer may file for approval and use of any deviated rates that are higher than

the prima facie rates referred to in R20-6-604.04 and R20-6-604.05 as prescribed in A.R.S. § 20-1610.

1. The deviated rates shall meet the minimum loss ratio standards and other requirements prescribed by R20-6-604.02.
2. The filing shall specify the accounts to which the rates apply.
3. The rates may be:
 - a. Applied uniformly to all accounts of the insurer; or
 - b. Applied on an equitable basis approved by the Director to accounts of the insurer for which the insurer's experience has been less favorable than expected.
- B. Approval period of deviated rates. An insurer may use a deviated rate for the same period of time as the experience period used to establish the rate, not to exceed a period of three years from the date of approval. An insurer may file for a new deviated rate before the end of the approval period, but not more often than once in any 12 month period.
- C. Approval is non-transferable. The Director's approval of a deviated rate is not transferable to another insurer. If an insurer acquires an account for which another insurer obtained a deviated rate, the successor insurer may not charge the deviated rate without obtaining approval for the deviated rate as prescribed in subsection (B).
- D. Use of rates lower than filed rates. An insurer may use a rate that is less than its filed rate without notice to the Director.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.09. Supervision of Consumer Credit Insurance Operations

- A. At least once every three years, an insurer transacting credit insurance in Arizona shall review the credit insurance operations of each creditor with whom the insurer does business to ensure that each creditor is complying with applicable credit insurance laws. The insurer shall review the following:
 1. The creditor does not charge rates in excess of the prima facie rates or any deviated rates for which the insurer obtains approval;
 2. The creditor makes benefit payments as prescribed in the policy; and
 3. The creditor refunds unearned premiums as prescribed in R20-6-604.06.
- B. The insurer shall maintain for the Director's inspection a written record of each review and action the insurer takes to address any creditor noncompliance found by the insurer, for at least three years following the end of the review.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-604.10. Prohibited Transactions

- A. The practices listed in this Section are deemed unfair trade practices under A.R.S. § 20-442. An insurer that commits any of the following practices is subject to penalties as prescribed in A.R.S. § 20-456:
 1. Offering or providing a creditor with any special advantage or any service not set out in either the group insurance contract or in the agency contract, other than payment of commissions;
 2. Agreeing to deposit with a bank or financial institution, the insurer's money or securities as a substitute for a deposit of money or securities that the financial institution would otherwise require from the creditor as a com-

pensating balance or deposit offset for a loan or other advancement; or

3. Depositing money or securities without interest or at a lesser rate of interest than the creditor, bank, or financial institution is currently paying on other similar deposits.

- B.** This Section does not prohibit an insurer from maintaining demand deposits or premium deposit accounts that are reasonably necessary for use in the ordinary course of the insurer's business.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2725, effective June 7, 2002 (Supp. 02-2).

R20-6-605. Emergency Expired

Historical Note

Former General Rule 72-26. Repealed effective December 4, 1986 (Supp. 86-6). Adopted as an emergency effective January 9, 1990, pursuant to A.R.S. § 41-1026 valid for only 90 days; re-adopted as an emergency with changes effective March 26, 1990, pursuant to A.R.S. § 41-1026 valid for only 90 days (Supp. 90-1). Re-adopted as an emergency without change effective June 20, 1990, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 90-2). Emergency expired. R20-6-605 recodified from R4-14-605 (Supp. 95-1).

R20-6-606. Repealed

Historical Note

Adopted effective July 1, 1980 (Supp. 80-3). Amended effective June 1, 1981. See also subsection (G) (Supp. 81-1). Amended subsections (D), (E)(3)(a), (F)(2)(b), (3)(a), (4)(e), (G), and (H) effective January 11, 1982 (Supp. 82-1). Amended subsections (G) and (H) as an emergency effective August 1, 1988, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 88-3). Emergency expired.

Amended and readopted as an emergency effective November 18, 1988, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 88-4). Emergency expired. Corrected and readopted as an emergency effective February 10, 1989, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 89-1). Emergency expired. Amended effective August 4, 1989 (Supp. 89-3). Amended and adopted as an emergency effective September 13, 1989 (Supp. 89-3). Emergency expired (Supp. 89-4). Amended effective November 19, 1990 (Supp. 90-4). Repealed by emergency action effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Repealed again by emergency action effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Repealed effective May 28, 1992 (Supp. 92-2). R20-6-606 recodified from R4-14-606 (Supp. 95-1).

R20-6-607. Reasonableness of Benefits in Relation to Premium Charged

- A.** Applicability. This rule shall apply to individual disability insurance (as defined in A.R.S. § 20-253) policy forms and rates.
- B.** When rate filing is required. Every individual policy form, rider or endorsement form affecting benefits which is submitted for approval shall be accompanied by a rate filing unless such rider or endorsement form does not require a change in the rate. Any subsequent addition to or change in rates applicable to such policy, rider or endorsement form shall also be filed.
- C.** General contents of all rate filings. Each rate submission shall include an actuarial memorandum describing the basis on

which rates were determined and shall indicate and describe the calculation of the ratio, hereinafter called "anticipated loss ratio," of the present value of the expected benefits to the present value of the expected premiums over the entire period for which rates are computed to provide coverage. Each rate submission must also include a certification by a qualified actuary that to the best of the actuary's knowledge and judgment, the rate filing is in compliance with applicable laws and regulations of this state and that the benefits are reasonable in relation to the premiums.

- D.** Previously approved forms. Filings of rate revisions for a previously approved policy, rider or endorsement form shall also include the following:

1. A statement of the scope and reason for the revision, and an estimate of the expected average effect on premiums including the anticipated loss ratio for the form.
2. A statement as to whether the filing applies only to new business, only to in-force business, or both, and the reasons.
3. A history of the experience under existing rates, including at least the data indicated in subsection (E). The history may also include, if available and appropriate, the ratios of actual claims to the claims expected according to the assumptions underlying the existing rates. All additional data must be reconciled, as appropriate, to the required data. Additional data might include:
 - a. Substitution of actual claim run-offs for claim reserves and liabilities,
 - b. Determination of loss ratios with the increase in policy reserves (other than unearned premium reserves) added to benefits rather than subtracted from premiums,
 - c. Substitution of net level policy reserves for preliminary term policy reserves,
 - d. Adjustment of premiums to an annual mode basis, or
 - e. Other adjustments or schedules suited to the form and to the records of the company.
4. The date and magnitude of each previous rate change, if any.

- E.** Experience records. Insurers shall maintain records of earned premiums and incurred benefits for each calendar year for each policy form, including data for rider and endorsement forms which are used with the policy form, on the same basis, including all reserves, as required for the Accident and Health Policy Experience Exhibit to the NAIC annual statement convention blank. Separate data may be maintained for each rider or endorsement form to the extent appropriate. Experience under forms which provide substantially similar coverage may be combined. The data shall be for all years of issue combined, for each calendar year of experience since the year the form was first issued, except the data for calendar years prior to the most recent five years may be combined.

- F.** Evaluation experience data. In determining the credibility and appropriateness of experience data, due consideration must be given to all relevant factors, such as:

1. Statistical credibility of premiums and benefits, e.g., low exposure, low loss frequency.
2. Experienced and projected trends relative to the kind of coverage, e.g., inflation in medical expenses, economic cycles affecting disability income experience.
3. The concentration of experience at early policy durations where select morbidity and preliminary term reserves are applicable and where loss ratios are expected to be substantially lower than at later policy durations.
4. The mix of business by risk classification.

G. Anticipated loss ratio standard. With respect to a new form or a currently approved form, except currently approved non-cancelable policy forms, under which the average annual premium (as defined below) is expected to be at least \$700, benefits shall be deemed reasonable in relation to premiums provided the anticipated loss ratio is at least as great as shown in the following table:

Type of Coverage	Renewal Clause			
	OR	CR	GR	NC
Medical expense	60%	55%	55%	50%
Loss of income and other	60%	55%	50%	45%

For a policy form including riders and endorsements, under which the expected average annual premium per policy is \$200 or more but less than \$700, subtract 5 percentage points from the numbers in the table above, or if less than \$200, subtract 10 percentage points.

The average annual premium per policy shall be computed by the insurer based on an anticipated distribution of business by all applicable criteria having a price difference, such as age, sex, amount, dependent status, rider frequency, etc., except assuming an annual mode for all policies (i.e., the fractional premium loading shall not affect the average annual premium or anticipated loss ratio calculation.)

The above anticipated loss ratio standards do not apply to a class of business which is regulated by specific statutes or regulations mandating loss ratios for such business, e.g., Medicare Supplement and Credit Life and Disability.

Definitions of Renewal Clause

OR – Optionally Renewable: renewal is at the option of the insurance company.

CR – Conditionally Renewable: renewal can be declined by the insurance company only for stated reasons other than deterioration of health.

GR – Guaranteed Renewable: renewal cannot be declined by the insurance company for any reason, but the insurance company can revise rates on a class basis.

NC – Non-Cancelable: renewal cannot be declined nor can rates be revised by the insurance company.

H. Rate revisions. With respect to filings of rate revisions for a previously approved form, benefits shall be deemed reasonable in relation to premiums provided both the following loss ratios meet the standards in subsection (G) above.

1. The anticipated loss ratio over the entire future period for which the revised rates are computed to provide coverage;
2. The anticipated loss ratio derived by dividing (a) by (b) where:
 - a. Is the sum of the accumulated benefits, from the original effective date of the form or the effective date of this regulation, whichever is later, to the effective date of the revision, and the present value of future benefits; and
 - b. Is the sum of the accumulated premiums from the original effective date of the form or the effective date of the regulation, whichever is later, to the effective date of the revision, and the present value of future premiums. Such present values shall be taken over the entire period for which the revised rates are computed to provide coverage, and such accumulated benefits and premiums to include an explicit estimate of the actual benefits and premiums from the last date as of which an accounting has been made to the effective date of the revision. Inter-

est shall be used in the calculation of these accumulated benefits and premiums and present values only if it is a significant factor in the calculation of this loss ratio.

- I. Anticipated loss ratios lower than those indicated in subsections (H)(1) and (H)(2) will require justification based on the special circumstances that may be applicable.
 1. Examples of coverages requiring special consideration are as follows:
 - a. Accident only;
 - b. Short term nonrenewable, e.g., airline trip, student accident;
 - c. Specified peril, e.g., common carrier; and
 - d. Other special risks.
 2. Examples of other factors requiring special consideration are as follows:
 - a. Marketing methods, giving due consideration to acquisition and administration costs and to premium mode;
 - b. Extraordinary expenses;
 - c. High risk of claim fluctuation because of the low loss frequency of the catastrophic, or experimental nature of the coverage;
 - d. Product features such as long elimination periods, high deductibles and high maximum limits;
 - e. The industrial or debit method of distribution; and
 - f. Forms issued prior to the effective date of this rule. Companies are urged to review their experience periodically and to file rate revisions, as appropriate, in a timely manner to avoid the necessity of later filing of exceptionally large rate increases.
 3. Notwithstanding the foregoing paragraphs to the contrary, hospital indemnity and cancer and other dread diseases policies shall develop the loss ratios pursuant to subsection (G).
- J. Severability provision. If any provision of this rule or the application thereof to any person or circumstances is held invalid, the remainder of the rule and the application of such provision to other persons or circumstances shall not be affected thereby.
- K. Effective date. This rule shall become effective upon filing with the Secretary of State and shall apply to all individual disability policy form and rate filings submitted on and after said date.

Historical Note

Adopted effective July 14, 1981 (Supp. 81-1). R20-6-607 recodified from R4-14-607 (Supp. 95-1). Amended by final rulemaking at 24 A.A.R. 103, effective February 17, 2018 (Supp. 17-4).

ARTICLE 7. LICENSING PROVISIONS AND PROCEDURES

R20-6-701. Repealed

Historical Note

Former General Rule 56-1; Repealed effective January 1, 1981 (Supp. 80-6). R20-6-701 recodified from R4-14-701 (Supp. 95-1).

R20-6-702. Expired

Historical Note

Former General Rule 56-2. R20-6-702 recodified from R4-14-702 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 9 A.A.R. 2115, effective April 30, 2003 (Supp. 03-2).

R20-6-703. Expired

Historical Note

Former General Rule 61-6. R20-6-703 recodified from R4-14-703 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 9 A.A.R. 2115, effective April 30, 2003 (Supp. 03-2).

R20-6-704. Expired**Historical Note**

Former General Rule 6-19. R20-6-704 recodified from R4-14-704 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 9 A.A.R. 2115, effective April 30, 2003 (Supp. 03-2).

R20-6-705. Expired**Historical Note**

Former General Rule 66-13. R20-6-705 recodified from R4-14-705 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 9 A.A.R. 2115, effective April 30, 2003 (Supp. 03-2).

R20-6-706. Expired**Historical Note**

Former General Rule 69-15; Repealed effective February 22, 1977 (Supp. 77-1). New Section R4-14-706 adopted effective November 5, 1980 (Supp. 80-5). R20-6-706 recodified from R4-14-706 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 9 A.A.R. 2115, effective April 30, 2003 (Supp. 03-2).

R20-6-707. Expired**Historical Note**

Former General Rule 69-18; Amended effective March 17, 1981 (Supp. 81-2). R20-6-707 recodified from R4-14-707 (Supp. 95-1). Section expired under A.R.S. § 41-1056(E) at 9 A.A.R. 2115, effective April 30, 2003 (Supp. 03-2).

R20-6-708. Licensing Time-frames

- A.** Definitions. The definitions listed below apply in this Section.
1. "Administrative completeness review time frame" means the number of days from the Department's receipt of an application for a license until the Department determines that the application contains all components required by statute or rule, including all information required to be submitted by other government agencies A.R.S. § 41-1072 (1).
 2. "License" has the meaning prescribed in A.R.S. § 41-1001(10).
 3. "Overall time frame" means the number of days after the Department's receipt of an application for a license during which the Department determines whether to grant or deny a license. The overall time frame consists of both the administrative completeness review time frame and the substantive review time frame A.R.S. § 41-1072 (2).
 4. "Substantive review time frame" means the number of days after the completion of the administrative completeness review time frame during which the Department determines whether an application or applicant for a license meets all substantive criteria required by state or rule A.R.S. § 41-1072(3).
- B.** The time-frames listed in Table A apply to licenses issued by the Department. The licensing time-frames consist of an administrative completeness review, a substantive review, and an overall review.

- C. Within the time-frame for the administrative completeness review set forth in Table A, the Department shall notify the applicant in writing of whether the application is complete or incomplete. If the application is incomplete, the Department shall issue a notice of deficiency to the applicant specifying what information or component is required to make the application administratively complete.
 1. If the Department determines that an application for a license is not administratively complete, the Department shall include a comprehensive list of the specific deficiencies in the written notice provided under subsection (C). If the Department issues a written notice of deficiency within the administrative completeness review time-frame, the administrative completeness review time-frame and the overall review time-frame are suspended from the date the notice is issued until the date that the Department receives the missing information from the applicant.
 2. If an applicant does not make some response to each specific deficiency in a notice of deficiency issued during an administrative completeness review, the Department may issue a notice to the applicant within 10 days after receipt of the applicant's response, stating that the response is inadequate. The notice of inadequate response shall identify each specified deficiency to which the applicant did not make some response.
 - a. If the Department issues a notice of inadequate response under this subsection, the suspension of the administrative completeness review time-frame and the overall time-frame is not terminated.
 - b. If the Department does not issue a notice of inadequate response under this subsection, the Department is not precluded from issuing additional notices of deficiency during an administrative completeness review.
 3. If an applicant does not make some response to each specified deficiency in a notice of deficiency issued under subsection (C)(2) within 60 days after the date of a notice of deficiency or within 60 days after a notice of inadequate response issued under subsection (C)(2), the application is deemed withdrawn, and the Department is not required to take further action with respect to the application.
- D. Within the time-frame for the substantive review set forth in Table A, the Department may issue one comprehensive written request for additional information to the applicant specifying each component or item of information required.
 1. If the Department issues a comprehensive written request for additional information within the substantive review time-frame, the substantive review time-frame and the overall time-frame are suspended from the date the written request is issued until the date that the Department receives the additional information from the applicant.
 2. If an applicant does not make some response to each component or item of information requested in a comprehensive written request for additional information, the Department may issue a notice to the applicant within 10 days after receipt of the applicant's response stating that the response is inadequate. The notice of inadequate response shall identify each component or item of information required, to which the applicant did make some response.
 - a. If the Department issues a notice of inadequate response under this subsection, the suspension of the substantive review time-frame and overall time-frame is not terminated.

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- b. If the Department does not issue a notice of inadequate response under this subsection, the Department is not precluded from later issuing supplemental requests by mutual agreement for additional information, during the substantive review.
3. If an applicant does not make some response to each component or item of information required in a comprehensive written request or a supplemental request for additional information, within 60 days after the date of a comprehensive written request or within 60 days after the date of the supplemental request, the application is deemed withdrawn, and the Department is not required to take further action with respect to the application.
- E. Within the overall time-frames set forth in Table A, unless extended by mutual agreement under A.R.S. § 41-1075, the Department shall notify the applicant in writing that the application is granted or denied. If the application is denied, the Department shall provide written justification for the denial and a written explanation of the applicant's right to a hearing or the applicant's right to appeal.
- F. In computing the time periods prescribed in these time-frame rules, the last day of a notice period is included in the computation, unless it is a Saturday, Sunday, or legal holiday.
- G. This rule applies to applications filed on or after January 1, 1999.

Historical Note

Former General Rule 70-22; Correction, original publication did not include Exhibit C. (Supp. 76-1). Repealed effective January 8, 1980 (Supp. 80-1). R20-6-708 recodified from R4-14-708 (Supp. 95-1). Amended effective January 1, 1999; filed in the Office of the Secretary of State December 4, 1998 (Supp. 98-4).

R20-6-709. Repealed**Historical Note**

Former General Rule 71-23; Repealed effective January 1, 1981 (Supp. 80-6). R20-6-709 recodified from R4-14-709 (Supp. 95-1).

Table A. Licensing Time-frames Table

License	Relevant A.R.S.	Administrative Completeness	Substantive Review	Overall Time-frame
Certificate of Authority*	§ 20-216	210	90	300
Certificate of Exemption	§ 20-401.05	92	30	122
Reinsurance Intermediary	§ 20-486.01	120	60	180
Hospital, Medical, Dental, and Optometric Service Corporation	§ 20-825	210	90	300
Prepaid Dental Plan Organization	§ 20-1004	210	90	300
Life Care Provider Permit*	§ 20-1803	60	30	90
Health Care Services Organization	§ 20-1052	210	90	300
Mechanical Reimbursement Reinsurer	§ 20-1096.04	210	90	300
Prepaid Legal Insurer*	§ 20-1097.02	45	15	60
Service Representative	§ 20-285	120	60	180
Managing General Agent-Firm	§ 20-284	120	60	180
Managing General Agent-Individual	§ 20-288	120	60	180
Risk Management Consultant	§ 20-289	120	60	180
Agent, Broker and Solicitor	§ 20-291	120	60	180
Nonresident Agent and Broker	§ 20-303	120	60	180
Vending Machine	§ 20-306	120	60	180
Limited Travel Agent	§ 20-306.01	120	60	180
Adjuster	§ 20-312	120	60	180
Bail Bond Agent	§ 20-319	120	60	180
Surplus Lines Broker	§ 20-411	120	60	180
Title Insurance Agent	§ 20-1580	120	60	180
Credit Life and Disability Agents	§ 20-1612	120	60	180
Variable Contract Agent	§ 20-2662	120	60	180
Utilization Review Agent	§ 20-2505	30	90	120
Rating Organization*	§ 20-361	30	30	60
Rate Service Organization	§ 20-389	60	60	120
Qualifying Surplus Lines Insurer	§ 20-413	45	30	75
Third Party Administrator	§ 20-485.12	45	45	90
Service Companies	§ 20-1095.01	30	30	60
Risk Retention Group (Foreign)*	§ 20-2403	60	0	60
Risk Purchasing Groups	§ 20-2407	30	30	60

* Statutory time-frames

Historical Note

Table 1 adopted effective January 1, 1999; filed in the Office of the Secretary of State December 4, 1998 (Supp. 98-4).

ARTICLE 8. PROHIBITED PRACTICES, PENALTIES

R20-6-801. Unfair Claims Settlement Practices

- A.** Applicability. This rule applies to all persons and to all insurance policies, insurance contracts and subscription contracts except policies of Worker's Compensation and title insurance. This rule is not exclusive, and other acts not herein specified, may also be deemed to be a violation of A.R.S. § 20-461, The Unfair Claims Settlement Practices Act.
- B.** Definitions

1. "Agent" means any individual, corporation, association, partnership or other legal entity authorized to represent an insurer with respect to a claim.
2. "Claimant" means either a first party claimant, a third party claimant, or both and includes such claimant's designated legal representative and includes a member of the claimant's immediate family designated by the claimant.
3. "Director" means the Director of Insurance of the State of Arizona.

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4. "First party claimant" means an individual, corporation, association, partnership or other legal entity asserting a right to payment under an insurance policy or insurance contract arising out of the occurrence of the contingency of loss covered by such policy or contract.
 5. "Insurance policy or insurance contract" has the meaning of A.R.S. § 20-103.
 6. "Insurer" has the meaning of A.R.S. § 20-106(C).
 7. "Investigation" means all activities of an insurer directly or indirectly related to the determination of liabilities under coverages afforded by an insurance policy or insurance contract.
 8. "Notification of claim" means any notification, whether in writing or other means, acceptable under the terms of any insurance policy or insurance contract, to an insurer or its agent, by a claimant, which reasonably apprises the insurer of the facts pertinent to a claim.
 9. "Person" has the meaning of A.R.S. § 20-105.
 10. "Third party claimant" means any individual, corporation, association, partnership or other legal entity asserting a claim against any individual, corporation, association, partnership or other legal entity insured under an insurance policy or insurance contract of an insurer.
 11. "Worker's compensation" includes, but is not limited to, Longshoremen's and Harbor Worker's Compensation.
- C.** File and record documentation. The insurer's claim files shall be subject to examination by the Director or by his duly appointed designees. Such files shall contain all notes and work papers pertaining to the claim in such detail that pertinent events and the dates of such events can be reconstructed.
- D.** Misrepresentation of policy provisions
1. No insurer shall fail to fully disclose to first party claimants all pertinent benefits, coverages or other provisions of an insurance policy or insurance contract under which a claim is presented.
 2. No agent shall conceal from first party claimants benefits, coverages or other provisions of any insurance policy or insurance contract when such benefits, coverages or other provisions are pertinent to a claim.
 3. No insurer shall deny a claim on the basis that the claimant has failed to exhibit the damaged property to the insurer, unless the insurer has requested the claimant to exhibit the property and the claimant has refused without a sound basis therefor.
 4. No insurer shall, except where there is a time limit specified in the policy, make statements, written or otherwise, requiring a claimant to give written notice of loss or proof of loss within a specified time limit and which seek to relieve the company of its obligations if such a time limit is not complied with unless the failure to comply with such time limit prejudices the insurer's rights.
 5. No insurer shall request a first party claimant to sign a release that extends beyond the subject matter that gave rise to the claim payment.
 6. No insurer shall issue checks or drafts in partial settlement of a loss or claim under a specific coverage which contain language that releases the insurer or its insured from its total liability.
- E.** Failure to acknowledge pertinent communications
1. Every insurer, upon receiving notification of a claim shall, within 10 working days, acknowledge the receipt of such notice unless payment is made within such period of time. If an acknowledgment is made by means other than writing, an appropriate notation of such acknowledgment shall be made in the claim file of the insurer and dated. Notification given to an agent of an insurer shall be notification to the insurer.
 2. Every insurer, upon receipt of any inquiry from the Department of Insurance respecting a claim shall, within fifteen working days of receipt of such inquiry, furnish the Department with an adequate response to the inquiry.
 3. An appropriate reply shall be made within 10 working days on all other pertinent communications from a claimant which reasonably suggest that a response is expected.
 4. Every insurer, upon receiving notification of claim, shall promptly provide necessary claim forms, instructions, and reasonable assistance so that first party claimants can comply with the policy conditions and the insurer's reasonable requirements. Compliance with this paragraph within 10 working days of notification of a claim shall constitute compliance with paragraph (1) of this subsection.
- F.** Standards for prompt investigation of claims. Every insurer shall complete investigation of a claim within 30 days after notification of claim, unless such investigation cannot reasonably be completed within such time.
- G.** Standards for prompt, fair and equitable settlements applicable to all insurers
1. Notice of acceptance or denial of claim.
 - a. Within fifteen working days after receipt by the insurer of properly executed proofs of loss, the first party claimant shall be advised of the acceptance or denial of the claim by the insurer. No insurer shall deny a claim on the grounds of a specific policy provision, condition, or exclusion unless reference to such provision, condition or exclusion is included in the denial. The denial must be given to the claimant in writing and the claim file of the insurer shall contain a copy of the denial.
 - b. If the insurer needs more time to determine whether a first party claim should be accepted or denied, it shall also notify the first party claimant within fifteen working days after receipt of the proofs of loss, giving the reasons more time is needed. If the investigation remains incomplete, the insurer shall, 45 days from the date of the initial notification and every 45 days thereafter, send to such claimant a letter setting forth the reasons additional time is needed for investigation.
 - c. Where there is a reasonable basis supported by specific information available for review by the Director for suspecting that the first party claimant has fraudulently caused or contributed to the loss by arson, the insurer is relieved from the requirements of subparagraphs (a) and (b) above. Provided, however, that the claimant shall be advised of the acceptance or denial of the claim by the insurer within a reasonable time for full investigation after receipt by the insurer of a properly executed proof of loss.
 2. If a claim is denied for reasons other than those described in subparagraph (a) above, and is made by any other means than writing, an appropriate notation shall be made in the claim file of the insurer.
 3. Insurers shall not fail to settle first party claims on the basis that responsibility for payment should be assumed by others, except as may otherwise be provided by policy provisions.
 4. Insurers shall not continue negotiations for settlement of a claim directly with a claimant who is neither an attorney nor represented by an attorney until the claimant's rights may be affected by a statute of limitations or a policy or

contract time limit, without giving the claimant written notice that the time limit may be expiring and may affect the claimant's right. Such notice shall be given to first party claimants 30 days and to third party claimants 60 days before the date on which such time limit may expire.

5. No insurer shall make statements which indicate that the rights of a third party claimant may be impaired if a form or release is not completed within a given period of time unless the statement is given for the purpose of notifying the third party claimant of the provision of a statute of limitations.

H. Standards for prompt, fair and equitable settlements applicable to automobile insurance

1. When the insurance policy provides for the adjustment and settlement of first party automobile total losses on the basis of actual cash value or replacement with another of like kind and quality, one of the following methods must apply:

- a. The insurer may elect to offer a replacement automobile which is a specific comparable automobile available to the insured, with all applicable taxes, license fees and other fees incident to transfer of evidence of ownership of the automobile paid, at no cost other than any deductible provided in the policy. The offer and any rejection thereof must be documented in the claim file.

- b. The insurer may elect a cash settlement based upon the actual cost, less any deductible provided in the policy, to purchase a comparable automobile including all applicable taxes, license fees and other fees incident to transfer of evidence of ownership of a comparable automobile. Such cost may be determined by:

- i. The cost of a comparable automobile in the local market area when a comparable automobile is available in the local market area.

- ii. One of two or more quotations obtained by the insurer from two or more qualified dealers located within the local market area when a comparable automobile is not available in the local market area.

- c. When a first party automobile total loss is settled on a basis which deviates from the methods described in subparagraphs (a) and (b) above, the deviation must be supported by documentation giving particulars of the automobile condition. Any deductions from such cost, including deduction for salvage, must be measurable, discernible, itemized and specified as to dollar amount and shall be appropriate in amount. The basis for such settlement shall be fully explained to the first party claimant.

2. Where liability and damages are reasonably clear, insurers shall not recommend that third party claimants make claim under their own policies solely to avoid paying claims under such insurer's policy or insurance contract.
3. Insurers shall not require a claimant to travel unreasonably either to inspect a replacement automobile, to obtain a repair estimate or to have the automobile repaired at a specific repair shop.
4. Insurers shall, upon the claimant's request, include the first party claimant's deductible, if any, in subrogation demands. Subrogation recoveries shall be shared on a proportionate basis with the first party claimant, unless the deductible amount has been otherwise recovered. No deduction for expenses can be made from the deductible recovery unless an outside attorney is retained to collect

such recovery. The deduction may then be for only a pro rata share of the allocated loss adjustment expense.

5. If an insurer prepares an estimate of the cost of automobile repairs, such estimate shall be in an amount for which it may be reasonably expected the damage can be satisfactorily repaired. The insurer shall give a copy of the estimate to the claimant and may furnish to the claimant the names of one or more conveniently located repair shops.
 6. When the amount claimed is reduced because of betterment or depreciation all information for such reduction shall be contained in the claim file. Such deductions shall be itemized and specified as to dollar amount and shall be appropriate for the amount of deductions.
 7. When the insurer elects to repair and designates a specific repair shop for automobile repairs, the insurer shall cause the damaged automobile to be restored to its condition prior to the loss at no additional cost to the claimant other than as stated in the policy and within a reasonable period of time.
 8. The insurer shall not use as a basis for cash settlement with a first party claimant an amount which is less than the amount which the insurer would pay if the repairs were made, other than in total loss situations, unless such amount is agreed to by the insured.
- I. Severability.** If any provision of this rule or the application thereof to any person or circumstances is held invalid, the remainder of the rule and the application of such provision to other persons and circumstances shall not be affected.
- J. Effective date.** This rule shall become effective 90 days from the date of filing with the Secretary of State.

Historical Note

Adopted effective January 12, 1982 (Supp. 81-5). R20-6-801 recodified from R4-14-801 (Supp. 95-1).

R20-6-802. Emergency Expired

Historical Note

Emergency rule adopted effective May 31, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-2). Emergency expired. Emergency rule readopted without change effective September 5, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-3). Emergency expired. R20-6-802 recodified from R4-14-802 (Supp. 95-1).

ARTICLE 9. TERMINATION OR DISSOLUTION

R20-6-901. Reserved

ARTICLE 10. LONG-TERM CARE INSURANCE

R20-6-1001. Applicability and Scope

Except as otherwise specifically provided, this Article applies to all long-term care insurance policies, including qualified long-term care contracts and life insurance policies that accelerate benefits for long-term care, delivered or issued for delivery in this state by insurers; fraternal benefit societies; nonprofit health, hospital and medical service corporations; prepaid health plans; health care service organizations and all similar organizations.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1001 recodified from R4-14-1001 (Supp. 95-1). Amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1002. Definitions

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The definitions in A.R.S. § 20-1691 and the following definitions apply in this Article.

- A.** “Benefit trigger,” for purposes of a tax-qualified long-term care insurance contract, as defined in Section 7702B(b) of the Internal Revenue Code of 1968, as amended, “benefit trigger” shall include a determination by a licensed health care practitioner that an insured is a chronically ill individual.
- B.** “Exceptional increase” means only those rate increases that an insurer has filed as exceptional and that the Director determines the need for the premium rate increase is justified due to changes in laws or regulations applicable to long-term care coverage in this state; or due to increased and unexpected utilization that affects the majority of insurers of similar products.
1. Except as provided in Sections R20-6-1014 and R20-6-1015, exceptional increases are subject to the same requirements as other premium rate schedule increases.
 2. The Director may request independent actuarial review on the issue of whether an increase should be deemed an exceptional increase.
 3. The Director may also determine whether there are any potential offsets to higher claims costs.
- C.** “Incidental,” as used in R20-6-1014(L) and R20-6-1015(L), means that the value of the long-term care benefits provided is less than 10% of the total value of the benefits provided over the life of the policy, with value measured as of the date of issue.
- D.** “Licensed health care professional” means an individual qualified by education and experience in an appropriate field, to determine, by record review, an insured’s actual functional or cognitive impairment.
- E.** “Long-term care benefit classification” means one of the following:
1. Institutional long-term care – benefits only;
 2. Non-institutional long-term care – benefits only; or
 3. Comprehensive long-term care benefits.
- F.** “Managed care plan” means a health care or assisted living arrangement designed to coordinate patient care or control costs through utilization review, case management, use of specific provider networks, or a combination of these methods.
- G.** “Personal information” has the same meaning prescribed in A.R.S. § 20-2102(19).
- H.** “Privileged information” has the same meaning prescribed in A.R.S. § 20-2102(22).
- I.** “Qualified actuary” means a member in good standing of the American Academy of Actuaries.
- J.** “Similar policy forms” means all long-term care insurance policies and certificates that are issued by a particular insurer and that have the same long-term care benefit classification as a policy form being reviewed.
- professionals, such as physicians and registered nurses, to maintain the individual’s health status.
3. “Adult day care” means a program of social and health-related services for six or more individuals, that is provided during the day in a community group setting, for the purpose of supporting frail, impaired, elderly, or other disabled adults who can benefit from the services and care in a setting outside the home.
 4. “Agent” means an insurance producer as defined in A.R.S. § 20-281(5).
 5. “Bathing” means washing oneself by sponge bath, or in a tub or shower, and includes the act of getting in and out of the tub or shower.
 6. “Chronically ill individual” has the meaning prescribed for this term by A.R.S. § 20-1691(3) and Section 7702B(c)(2) of the Internal Revenue Code of 1986, as amended.
 - a. Under this provision, a chronically ill individual means any individual who has been certified by a licensed health care practitioner as:
 - i. Being unable to perform (without substantial assistance from another individual) at least 2 activities of daily living for a period of at least 90 days due to loss of functional capacity; or
 - ii. Requiring substantial supervision to protect the individual from threats to health and safety due to severe cognitive impairment.
 - b. The term “chronically ill individual” does not include an individual otherwise meeting these requirements unless within the preceding twelve-month period a licensed health care practitioner has certified that the individual meets these requirements.
 7. “Cognitive impairment” means a deficiency in a person’s:
 - a. Short or long-term memory;
 - b. Orientation as to person, place, or time;
 - c. Deductive or abstract reasoning; or
 - d. Judgment as it relates to safety awareness.
 8. “Continence” means the ability to maintain control of bowel and bladder function, or when unable to maintain control, the ability to perform associated personal hygiene, such as caring for a catheter or colostomy bag.
 9. “Dressing” means putting on and taking off all items of clothing and any necessary braces, fasteners, or artificial limbs.
 10. “Eating” means feeding oneself by getting food into the body from a receptacle such as a plate, cup, or table, or by a feeding tube or intravenously.
 11. “Guaranteed renewable” means the insured has the right to continue a long-term-care insurance policy in force by the timely payment of premiums and the insurer has no unilateral right to make any change in any provision of the policy or rider while the insurance is in force, and cannot decline to renew, except that the insurer may revise rates on a class basis.
 12. “Hands-on assistance” means physical help to an individual who could not perform an activity of daily living without help from another individual, and includes minimal, moderate, or maximal help.
 13. “Home health services” means the services described at A.R.S. § 36-151.
 14. “Level premium” means that an insurer does not have any right to change the premium, even at renewal.
 15. “Licensed health care practitioner” has the same meaning as A.R.S. § 20-1691(7).

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1002 recodified from R4-14-1002 (Supp. 95-1).

Amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1003. Policy Terms

- A.** A long-term care insurance policy delivered or issued for delivery in this state shall not use the terms set forth below, unless the terms are defined in the policy and the definitions satisfy the following requirements:
1. “Activities of daily living” means eating, toileting, transferring, bathing, dressing, or continence.
 2. “Acute condition” means that an individual is medically unstable and requires frequent monitoring by medical

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16. "Maintenance or personal care services" has the same meaning as A.R.S. § 20-1691(10).
 17. "Medicare" means "The Health Insurance for the Aged Act, Title XVIII of the Social Security Amendments of 1965 as Then Constituted or Later Amended," or "Title I, Part I of Public Law 89-97, as Enacted by the Eighty-Ninth Congress of the United States of America and popularly known as the Health Insurance for the Aged Act, as then constituted and any later amendments or substitutes thereof," or words of similar import.
 18. "Noncancellable" means the insured has the right to continue the long-term care insurance in force by the timely payment of premiums during which period the insurer has no right to unilaterally cancel or make any change in any provision of the insurance or in the premium rate.
 19. "Personal care" means the provision of hands-on assistance to help an individual with activities of daily living in relation to the level of skill required, the nature of the care, and the setting in which the care must be delivered.
 20. "Qualified long-term care services" has the meaning prescribed for this term under A.R.S. § 20-1691(14) and means services that meet the requirements of Section 7702B(c)(1) of the Internal Revenue Code of 1986, as amended, as follows: necessary diagnostic, preventative, therapeutic, curing, treating, mitigating and rehabilitative services, and maintenance or personal care services which are required by a chronically ill individual, and are provided pursuant to a plan of care prescribed by a licensed health care practitioner.
 21. "Toileting" means getting to and from the toilet, getting on and off the toilet, and performing tasks associated with personal hygiene.
 22. "Transferring" means moving into or out of a bed, chair, or wheelchair.
- B.** Any long-term care policy delivered or issued for delivery in this state shall include the following policy terms and provisions as specified in this subsection:
1. "Home care" shall be defined in relation to the level of skill required, the nature of the care, and the setting in which the care must be delivered.
 2. "Intermediate care" shall be defined in relation to the level of skill required, the nature of the care, and the setting in which the care must be delivered.
 3. "Mental or nervous disorder" shall not be defined to include more than neurosis, psychoneurosis, psychopathy, psychosis, or mental or emotional disease or disorder.
 4. "Skilled nursing care," "specialized care," "assisted living care" and other services shall be defined in relation to the level of skill required, the nature of the care and the setting in which care is delivered.
 5. Service providers, including "skilled nursing facility," "extended care facility," "convalescent nursing home," "personal care facility," "specialized care providers," "assisted living facility" and "home care agency" shall be defined in relation to the services and facilities required to be available and the licensure, certification, registration or degree status of those providing or supervising the services. When the definition requires that the provider be appropriately licensed, certified or registered, it shall also state what requirements a provider must meet in lieu of licensure, certification or registration when the state in which the service is to be furnished does not require a provider of these services to be licensed, certified or registered, or when the state licenses, certifies or registers the provider of services under another name.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1003 recodified from R4-14-1003 (Supp. 95-1). Amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1004. Required Policy Provisions**A. Renewability**

1. An individual long-term care insurance policy shall contain a renewability provision which shall be either "guaranteed renewable" or "noncancellable." The renewability provision shall be appropriately captioned, shall appear on the first page of the policy, and shall state that the coverage is guaranteed renewable or noncancellable. This requirement does not apply to a long-term care insurance policy that is part of or combined with a life insurance policy that does not contain a renewability provision and that reserves the right not to renew solely to the policyholder.
2. An insurer shall not use the terms "guaranteed renewable" and "noncancellable" in any individual long-term care insurance policy without further explanatory language according to the disclosure requirements of this Article.
3. A qualified long-term care insurance policy shall have the guaranteed renewability provisions specified in Section 7702B(b)(1)(C) of the Internal Revenue Code of 1986, as amended, in the policy.
4. A long-term care insurance policy or certificate shall include a statement that premium rates are subject to change, unless the policy does not afford the insurer the right to raise premiums.

B. Limitations and Exclusions

1. If a long-term care insurance policy or certificate contains any limitations with respect to preexisting conditions, the limitations shall appear as a separate paragraph of the policy or certificate and shall be labeled as "Preexisting Condition Limitations."
2. A long-term care insurance policy or certificate containing any limitations or conditions for eligibility not prohibited by A.R.S. §§ 20-1691.03 and 20-1691.05 shall describe the limitations or conditions, including any required number of days of confinement, in a separate paragraph of the policy or certificate and shall label the paragraph "Limitations or Conditions on Eligibility for Benefits."
3. A policy shall not be delivered or issued for delivery in this state as long-term care insurance if the policy limits or excludes coverage by type of illness, treatment, medical condition or accident, except as follows:
 - a. Preexisting conditions or disease;
 - b. Mental or nervous disorders; however, this shall not permit exclusion or limitation of the benefits on the basis of Alzheimer's Disease;
 - c. Alcoholism and drug addiction;
 - d. Illness, treatment or medical condition arising out of:
 - i. War, declared or undeclared, or act of war;
 - ii. Participation in a felony, riot or insurrection;
 - iii. Service in the armed forces or auxiliary units;
 - iv. Suicide, attempted suicide, or intentionally self-inflicted injury; or
 - v. Aviation, if non-fare-paying passenger;
 - e. Treatment provided in a government facility, unless otherwise required by law;

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- f. Services for which benefits are available under Medicare or other governmental program, except Medicaid;
- g. Any state or federal workers' compensation, employer's liability or occupational disease law, or any motor vehicle no-fault law;
- h. Services provided by a member of the covered person's immediate family and services for which no charge is normally made in the absence of insurance;
- i. Expenses for services or items available or paid under another long-term care insurance or health insurance policy; or
- j. In the case of a qualified long-term care insurance policy, expenses for services or items to the extent that the expenses are reimbursable under Title XVIII of the Social Security Act or would be reimbursable but for the application of a deductible or coinsurance amount;
4. Subsection (B) does not prohibit exclusions and limitations by type of provider or territorial limitations. No long-term care issuer may deny a claim because services are provided in a state other than the state of policy issued under the following conditions:
- a. When the state other than the state of policy issue does not have the provider licensing, certification or registration required in the policy, but where the provider satisfies the policy requirements outlined for providers in lieu of licensure, certification or registration; or
- b. When the state other than the state of policy issue licenses, certifies or registers the provider under another name.
5. "State of policy issue" means the state in which the insurer issued the individual policy or certificate.
- C.** Extension of benefits. A long-term care insurance policy shall provide that termination of long-term care insurance is without prejudice to any benefits payable for institutionalization if the institutionalization began while the long-term care insurance was in force and continues without interruption after termination. An insurer may limit this extension of benefits period to the duration of the benefit period, if any, or to payment of the maximum benefits and the insurer may still apply any policy waiting period and all other applicable provisions of the policy.
- D.** Reinstatement. A long-term care insurance policy shall include a provision for reinstatement of coverage if a lapse occurs if the insurer receives proof that the insured was cognitively impaired or had a loss of functional capacity before expiration of the grace period in the policy. The option to reinstate shall be available to the insured for at least five months after the date of termination and shall allow for the collection of past due premiums, as appropriate. The standard of proof of cognitive impairment or loss of functional capacity shall not be more stringent than the benefit eligibility criteria for these conditions set forth in the original long-term care policy.
- E.** Continuation or conversion.
1. A group long-term care insurance policy shall provide covered individuals with a basis for continuation or conversion of coverage as specified in this subsection.
 2. The policy shall include a provision that maintains coverage under the existing group policy when the coverage would otherwise terminate, subject only to the continued timely payment of premiums when due. A group policy that restricts provision of benefits and services to, or has incentives to use certain providers or facilities, may provide continuation benefits that are substantially equivalent to the benefits of the existing group policy. The Director shall make a determination as to the substantial equivalency of benefits and, in doing so, shall take into consideration the differences between managed care and non-managed care plans, including provider system arrangements, service availability, benefit levels and administrative complexity.
3. The policy shall include a provision that an individual, whose coverage under the group policy would otherwise terminate or has been terminated for any reason, including discontinuation of the group policy in its entirety or with respect to an insured class, who has been continuously insured under the group policy (and any group policy which it replaced) for at least six months immediately prior to termination, is entitled to the issuance of a converted policy by the insurer under whose group policy the individual is covered, without evidence of insurability.
 4. A converted policy shall be an individual policy of long-term care insurance providing benefits identical to or benefits that the Director determines to be substantially equivalent to or in excess of those provided under the group policy from which conversion is made. Where the group policy from which conversion is made restricts provision of benefits and services to, or contains incentives to use certain providers or facilities, the Director, in making a determination as to the substantial equivalency of benefits, shall take into consideration the differences between managed care and non-managed care plans, including, but not limited to, provider system arrangements, service availability, benefit levels and administrative complexity, and other plan elements.
 5. An insurer may require an individual seeking a conversion policy to make a written application for the converted policy and pay the first premium due, if any, as directed by the insurer not later than 31 days after termination of coverage under the group policy. The insurer shall issue the converted policy effective on the day following the termination of coverage under the group policy. The converted policy shall be renewable annually.
 6. Unless the group policy from which conversion is made replaced previous group coverage, the insurer shall calculate the premium for the converted policy on the basis of the insured's age at inception of coverage under the group policy from which conversion is made. If the group policy from which conversion is made replaced previous group coverage, the premium for the converted policy shall be calculated on the basis of the insured's age at inception of coverage under the group policy replaced.
 7. An insurer is required to provide continuation of coverage or issuance of a converted policy as provided in this subsection, unless:
 - a. Termination of group coverage resulted from an individual's failure to make any required payment of premium or contribution when due; or
 - b. The terminating coverage is replaced not later than 31 days after termination, by group coverage that:
 - i. Is effective on the day following the termination of coverage;
 - ii. Provides benefits identical to or benefits the Director determines to be substantially equivalent to or in excess of those provided by the terminating coverage; and
 - iii. Has a premium calculated in a manner consistent with the requirements of subsection (E)(6).
 8. Notwithstanding any other provision of this Section, a converted policy that an insurer issues to an individual

who at the time of conversion is covered by another long-term care insurance policy providing benefits on the basis of incurred expenses, may contain a provision that reduces benefits payable if the benefits provided under the additional coverage, together with the full benefits provided by the converted policy, would result in payment of more than 100% of incurred expenses. An insurer may include this provision in the converted policy only if the converted policy also provides for a premium decrease or refund that reflects the reduction in payable benefits.

9. The converted policy may provide that the benefits payable under the converted policy, together with the benefits payable under the group policy from which conversion is made, shall not exceed those that would have been payable had the individual's coverage under the group policy remained in force and effect.
 10. Notwithstanding any other provision of this Section, an insured individual whose eligibility for group long-term care coverage is based upon the individual's relationship to another person, is entitled to continuation of coverage under the group policy if the qualifying relationship terminates by death or dissolution of marriage.
- F. Discontinuance and replacement.** If a group long-term care policy is replaced by another group long-term care policy issued to the same policyholder, the succeeding insurer shall offer coverage to all persons covered under the previous group policy on its date of termination. Coverage provided or offered to individuals by the insurer and premiums charged to persons under the new group policy:
1. Shall not result in any exclusion for preexisting conditions that would have been covered under the group policy being replaced; and
 2. Shall not vary or otherwise depend on the individual's health or disability status, claim experience, or use of long-term care services.
- G. Premium Increases.**
1. An insurer shall not increase the premium charged to an insured because of:
 - a. The increasing age of the insured at ages beyond 65, or
 - b. The duration of coverage under the policy.
 2. Purchase of additional coverage is not considered a premium rate increase, however, for the calculation required under R20-6-1019, an insurer shall add to and consider the portion of the premium attributable to the additional coverage as part of the initial annual premium.
 3. A reduction in benefits is not considered a premium change, however, for the calculation required under R20-6-1019, an insurer shall base the initial annual premium on the reduced benefits.
- H. Electronic enrollment for group policies.**
1. For coverage offered to a group defined in A.R.S. § 20-1691(5)(a), any requirement that an insurer or insurance producer obtain an insured's signature is satisfied if:
 - a. The group policyholder or insurer obtains the insured's consent by telephonic or electronic enrollment, and provides the enrollee with verification of enrollment information within five business days of enrollment; and
 - b. The telephonic or electronic enrollment process has necessary and reasonable safeguards to assure the accuracy, retention, and prompt retrieval of records, and the confidentiality of individually identifiable and privileged information.
 2. If the Director requests, the insurer shall make available records showing the insurer's ability to confirm enrollment and coverage amounts.
- I. Minimum standards for home health and community care benefits.**
1. If an insurer issues a long-term care insurance policy or certificate that provides benefits for home-health or community care, the policy or certificate shall not limit or exclude benefits by any of the following:
 - a. Requiring that the insured would need skilled care in a skilled nursing facility if home health services are not provided;
 - b. Requiring that the insured first or simultaneously receive nursing or therapeutic services, or both, in a home, community or institutional setting before home health services are covered;
 - c. Requiring that eligible services be provided by a registered nurse or licensed practical nurse;
 - d. Requiring that a nurse or therapist provide services covered by the policy that can be provided by a home health aide or other licensed or certified home care worker acting within the scope of licensure or certification;
 - e. Requiring that the insured or claimant have an acute condition before home health services are covered;
 - f. Limiting benefits to services provided by Medicare-certified agencies or providers;
 - g. Excluding coverage for personal care services provided by a home health aide;
 - h. Requiring that home health care services be provided at a level of certification or licensure greater than that required by the eligible service; or
 - i. Excluding coverage for adult day care services.
 2. If a long-term care insurance policy provides benefits for home health or community care services, it shall provide home health or community care coverage that equals a dollar amount equivalent to at least one-half of one year's missing home benefit coverage available at the time covered home health or community care services are being received. This requirement does not apply to policies or certificates issued to residents of continuing care retirement communities.
 3. An insurer may apply home health care coverage to non-home health care benefits in the policy or certificate when determining maximum coverage under the terms of the policy or certificate.
- J. Appeals.** Policy shall include a clear description of the process for appealing and resolving benefit determinations.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1004 recodified from R4-14-1004 (Supp. 95-1). Amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1005. Unintentional Lapse

- A.** An insured may designate in writing at least one person to receive notice of lapse or termination of a long-term care insurance policy for nonpayment of premium, in addition to the insured. Designation shall not constitute acceptance of any liability by the third-party notice recipient for services provided to the insured.
- B.** An insurer shall not issue an individual long-term care insurance policy or certificate until the applicant has provided either a written designation of at least one person, in addition

to the applicant, who shall receive notice of lapse or termination of the policy or certificate for nonpayment of premium, with the person's full name and home address, or the applicant's written waiver, dated and signed, indicating that the applicant chooses not to designate a notice recipient.

- C. The insurer shall use a form for written designation or waiver that provides space clearly delineated for the designation. The insurer shall include the following language on the form for waiver of the right to name a designated recipient: "Protection against unintended lapse. I understand that I have the right to designate at least one person other than myself to receive notice of lapse or termination of this long-term care insurance policy for nonpayment of premium. I understand that this notice will not be given until 30 days after a premium is due and unpaid. I elect NOT to designate a person to receive this notice."
- D. At least once every two years, an insurer shall notify the insured of the right to change the person designated to receive notice in subsection (A). An insured may add, delete, or change a designated recipient or change a designated recipient at any time by notifying the insurer in writing, and providing the name and home address for the new designated recipient or the designated recipient to be deleted.
- E. If the insured pays premiums for the long-term care insurance policy or certificate through a payroll or pension deduction plan, the insurer is not required to comply with the requirements in subsections (A) through (D) until 60 days after the insured is no longer on the payment plan.
- F. An individual long-term care insurance policy shall not lapse or be terminated for nonpayment of premium unless the insurer gives the insured and any recipient designated under subsections (A) through (D) written notice at least 30 days before the effective date of termination or lapse, by first class mail, postage prepaid, at the address provided by the insured for purposes of receiving notice of lapse or termination. An insurer shall not give notice until 30 days after the date on which a premium is due and unpaid. Notice is deemed given five days after the date of mailing.
- G. Reinstatement. In addition to the requirement in subsections (A) through (D), a long-term care insurance policy or certificate shall include a provision that provides for reinstatement of coverage in the event of a lapse if the insurer is provided proof that the policyholder or certificateholder was cognitively impaired or had a loss of functional capacity before the grace period contained in the policy expired. This option shall be available to the insured if requested within five months after termination and shall allow for the collection of past due premium, where appropriate. The standard of proof of cognitive impairment or loss of functional capacity shall not be more stringent than the benefit eligibility criteria on cognitive impairment or the loss of functional capacity contained in the policy or certificate. Reinstatement after termination for other than unintentional lapse shall be governed by A.R.S. § 20-1348.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1005 recodified from R4-14-1005 (Supp. 95-1). Section R20-6-1005 renumbered to R20-6-1006; new Section R20-6-1005 made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1006. Inflation Protection

- A. An insurer shall not offer a long-term care insurance policy unless the insurer offers to the policyholder, at the time of pur-

chase, in addition to any other inflation protection, the option to purchase a policy with an inflation protection provision that provides for benefit levels to increase with benefit maximums or reasonable durations which are meaningful to account for reasonably anticipated increases in the costs of long-term care services covered by the policy. The terms of the required provision shall be no less favorable than one of the following:

1. A provision that provides for annual increases in benefit levels compounding annually at a rate of not less than 5%;
 2. A provision that guarantees an insured the right to periodically increase benefit levels without providing evidence of insurability or health status, if the insured did not decline the option for the previous period. The increased benefit shall be no less than the difference between the existing policy benefit and that benefit compounded annually at a rate of at least 5% for the period beginning from the purchase of the existing benefit and extending until the year in which the offer is made; or
 3. A provision for coverage of a specified percentage of actual or reasonable charges that is not subject to a maximum specified indemnity amount or limit.
- B. If the policy is issued to a group, the insurer shall extend the offer required by subsection (A) to the group policyholder; except, if the policy is issued under A.R.S. § 20-1691.04(C) to a group, other than to a continuing care retirement community, the insurer shall make the offer to each proposed certificateholder.
- C. An insurer is not required to make the offer in subsection (A) for life insurance policies or riders with accelerated long-term care benefits.
- D. An insurer shall include the information listed in this subsection in or with the outline of coverage.
 1. A graphic comparison of the benefit levels of a policy that increases benefits over the policy period with a policy that does not increase benefits. The graphic comparison shall show benefit levels over at least a 20-year period.
 2. Any expected premium increases or additional premiums to pay for automatic or optional benefit increases. If premium increases or additional premiums will be based on the attained age of the applicant at the time of the increase, the insurer shall provide a revised schedule of attained-age premiums. An insurer may use a reasonable hypothetical or a graphic demonstration for this disclosure.
- E. Inflation-protection benefit increases shall continue without regard to an insured's age, claim status, claim history, or length of time the person has been insured under the policy.
- F. An insurer's offer of inflation protection that provides for automatic benefit increases shall include an offer of a premium that the insurer expects to remain constant. The insurer shall disclose in the offer in a conspicuous manner that the premium may change in the future unless the premium is guaranteed to remain constant.
- G. An insurer shall include in a long-term care insurance policy inflation protection as provided in subsection (A)(1) unless the insurer obtains a rejection of inflation protection signed by the insured as required in subsection (H). The rejection may be either on the application form or on a separate form.
- H. A rejection of inflation protection is deemed part of an application and shall state: "I have reviewed the outline of coverage and the graphs that compare the benefits and premiums of this policy with and without inflation protection. Specifically, I reviewed Plans [insert description of plans], and I reject inflation protection."

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1006 recodified from R4-14-1006 (Supp. 95-1). R20-6-1006 renumbered to R20-6-1007; new Section R20-5-1006 renumbered from R20-6-1005 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1007. Required Disclosure Provisions

- A.** Riders and endorsements. Except for riders or endorsements by which an insurer effectuates a request made in writing by the insured under an individual long-term care insurance policy, if an insurer adds a rider or endorsement to an individual long-term care insurance policy after date of issue or at reinstatement or renewal that reduces or eliminates benefits or coverage in the policy, the insurer shall require signed acceptance by the individual insured. After the date of policy issue, any rider or endorsement that increases benefits or coverage with a concomitant increase in premium during the policy term shall require the signed written agreement of the insured unless the increased benefits or coverage are required by law. If the insurer charges a separate additional premium for benefits provided in connection with riders or endorsements, the premium charge shall be set forth in the policy, rider, or endorsement.
- B.** Payment of Benefits. A long-term care insurance policy that provides for the payment of benefits based on standards described as “usual and customary,” “reasonable and customary” or words of similar import shall define the terms and explain them in its accompanying outline of coverage.
- C.** Disclosure of tax consequences. For life insurance policies that provide an accelerated benefit for long-term care, an insurer shall provide a disclosure statement at the time of application for the policy or rider and at the time the accelerated benefit payment request is submitted, that receipt of these accelerated benefits may be taxable, and that assistance should be sought from a personal tax adviser. The disclosure statement shall be prominently displayed on the first page of the policy or rider and any other related documents. This subsection shall not apply to qualified long-term care insurance contracts.
- D.** Benefit triggers. A long-term care insurance policy shall use activities of daily living and cognitive impairment to measure an insured’s need for long-term care. The long-term care insurance policy shall describe these terms and provisions in a separate paragraph in the policy labeled “Eligibility for the Payment of Benefits” that includes and explains:
1. Any additional benefit triggers,
 2. Benefit triggers that result in payment of different benefit levels, and
 3. Any requirement that an attending physician or other specified person certify a certain level of functional dependency for the insured to be eligible for benefits.
- E.** A long-term care insurance contract shall contain a disclosure statement in the policy and in the outline of coverage indicating whether it is intended to be a qualified long-term care insurance contract as specified in the outline of coverage in Appendix J, paragraph 3. The contract shall also include a Specification Page which shall include the benefits, amounts, durations, the premium rate including all optional benefits selected by the insured, and any other benefit data applicable to the insured.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1007 recodified from R4-14-1007 (Supp. 95-1). Former

Section R20-6-1007 renumbered to R20-6-1010; new Section R20-6-1007 renumbered from R20-6-1006 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1008. Required Disclosure of Rating Practices to Consumers

- A.** This Section applies as follows:
1. Except as provided in subsection (A)(2), this Section applies to any long-term care policy or certificate issued in this state on or after May 10, 2005.
 2. For certificates issued under an in-force, long-term care insurance policy issued to a group as defined in A.R.S. § 20-1691(5)(a), the provisions of this Section apply on the first policy anniversary that occurs on or after November 10, 2005.
- B.** Unless a policy is one for which an insurer cannot increase the applicable premium rate or rate schedule, the insurer shall provide the information listed in this subsection to the applicant at the time of application or enrollment. If the method of application does not allow for delivery at that time, the insurer shall provide the information to the applicant no later than at the time of delivery of the policy or certificate.
1. A statement that the policy may be subject to rate increases in the future.
 2. An explanation of potential future premium rate revisions, and the policyholder’s or certificateholder’s option if a premium rate revision occurs.
 3. The premium rate or rate schedules applicable to the applicant that will be in effect until the insurer makes a request for an increase.
 4. A general explanation for applying premium rate or rate schedule adjustments that includes:
 - a. A description of when premium rate or rate-schedule adjustments will be effective (e.g., next anniversary date, next billing date); and
 - b. The insurer’s right to a revised premium rate or rate schedule as provided in subsection (B)(3) if the premium rate or rate schedule is changed.
 5. Information regarding each premium rate increase on this policy form or similar policy form over the past 10 years for this state or any other state that, at a minimum, identifies:
 - a. The policy forms for which premium rates have been increased;
 - b. The calendar years when the form was available for purchase; and
 - c. The amount or percent of each increase, which may be expressed as a percentage of the premium rate before the increase, or as minimum and maximum percentages if the rate increase is variable by rating characteristics.
 6. The insurer may, in a fair manner, provide explanatory information related to the rate increases in addition to the information required under subsection (B)(5).
- C.** An insurer may exclude from the disclosure required under subsection (B)(5), premium rate increases applicable to:
1. Blocks of business acquired from other nonaffiliated insurers, and
 2. Policies acquired from other nonaffiliated insurers if the increases occurred before the acquisition.
- D.** If an acquiring insurer files for a rate increase on a long-term care insurance policy form or a block of policy forms acquired from a nonaffiliated insurer on or before the later of the January 10, 2005, or the end of a 24-month period following the

acquisition of the policies or block of policies, the acquiring insurer may exclude that rate increase from the disclosure required under subsection (B)(5). However, the nonaffiliated insurer that sells the policy form or a block of policy forms shall include that rate increase in the disclosure required under subsection (B)(5). If the acquiring insurer files for a subsequent rate increase, even within the 24-month period, on the same policy form acquired from a nonaffiliated insurer or block of policy forms acquired from nonaffiliated insurers, the acquiring insurer shall make all disclosures required by subsection (B)(5), including disclosure of the earlier rate increase.

- E. Unless the method of application does not allow an insured to sign an acknowledgement that the insurer made the disclosures required under subsection (B) at the time of application, the applicant shall sign an acknowledgement of disclosure at that time. Otherwise, the applicant shall sign a disclosure acknowledgement no later than at the time of delivery of the policy or certificate.
- F. An insurer shall use the forms in Appendix A and Appendix B to comply with the requirements of subsections (B) through (E). The text and format of an insurer's forms shall be substantially similar to the text and format of Appendices A and B.
- G. An insurer shall provide notice of an upcoming premium rate schedule increase to all policyholders or certificateholders, if applicable, at least 45 days before the effective date of the increase. The notice shall include the information required by subsection (B).

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1008 recodified from R4-14-1008 (Supp. 95-1). Former Section R20-6-1008 renumbered to R20-6-1011; new Section R20-6-1008 made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1009. Initial Filing Requirements

- A. This Section applies to any long-term care policy issued in this state on or after May 10, 2005.
- B. At the time of making a filing under A.R.S. § 20-1691.08, an insurer shall provide to the Director a copy of the disclosure documents required under R20-6-1008 and an actuarial certification that includes the following:
 1. The initial premium rate schedule is sufficient to cover anticipated costs under moderately adverse experience and that the premium rate schedule is reasonably expected to be sustainable over the life of the form with no future premium increases anticipated;
 2. The policy design and coverage provided have been reviewed and taken into consideration;
 3. The underwriting and claims adjudication processes have been reviewed and taken into consideration;
 4. The premiums contain at least the minimum margin for moderately adverse experience as defined in subsection (4)(a) or the specification of and justification for a lower margin as required by subsection (4)(b).
 - a. A composite margin shall not be less than 10% of lifetime claims.
 - b. A composite margin that is less than 10% may be justified in uncommon circumstances. The proposed amount, full justification of the proposed amount and methods to monitor developing experience that would be the basis for withdrawal of approval for such lower margins must be submitted.
 - c. A composite margin lower than otherwise considered appropriate for the stand-alone long-term care

policy may be justified for long-term care benefits provided through a life policy or an annuity contract. Such lower composite margin, if utilized, shall be justified by appropriate actuarial demonstration addressing margins and volatility when considering the entirety of the product.

- d. A greater margin may be appropriate in circumstances where the company has less credible experience to support its assumptions used to determine the premium rates.
- 5. A statement that the premium rate schedule:
 - a. Is not less than the premium rate schedule for existing similar policy forms also available from the insurer except for reasonable differences attributable to benefits, or
 - b. A comparison of the premium schedules for similar policy forms that are currently available from the insurer with an explanation of the differences; and
- 6. A statement that reserve requirements have been reviewed and considered. Support for this statement shall include:
 - a. Sufficient detail or sample calculations provided so as to have a complete depiction of the reserve amounts to be held; and
 - b. A statement that the difference between the gross premium and the net valuation premium for renewal years is sufficient to cover expected renewal expenses; or if such a statement cannot be made, a complete description of the situations where this does not occur. An aggregate distribution of anticipated issues may be used as long as the underlying gross premiums maintain a reasonably consistent relationship.
- C. An actuarial memorandum shall be included that is signed by a member of the Academy of Actuaries and that addresses and supports each specific item required as part of the actuarial certification and provides at least the following:
 1. An explanation of the review performed by the actuary prior to making the statements in subsections (B)(2) and (B)(3);
 2. A complete description of pricing assumptions;
 3. Sources and levels of margins incorporated into the gross premiums that are the basis for the statement in subsection (B)(1) of the actuarial certification and an explanation of the analysis and testing performed in determining the sufficiency of the margins. The actuary shall clearly describe deviations in margins between ages, sexes, plans or states. Deviations in margins required to be described are other than those produced utilizing generally accepted actuarial methods for smoothing and interpolating gross premium scales; and
 4. A demonstration that the gross premiums include the minimum composite margin specified in subsection (B)(4).
- D. In any review of the actuarial certification and actuarial memorandum, the Director may request review by an actuary with experience in long-term care pricing who is independent of the insurer. In the event the Director asks for additional information as a result of any review, the period in A.R.S. § 20-1691.08 does not include the period during which the insurer is preparing the requested information.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1009 recodified from R4-14-1009 (Supp. 95-1). Section R20-6-1009 renumbered to R20-6-1012; new Section R20-6-1009 made by final rulemaking at 10 A.A.R. 4661,

effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1010. Requirements for Application Forms and Replacement Coverage; Prohibition Against Preexisting Conditions and Probationary Periods in Replacement Policies or Certificates; Reporting Requirements

- A.** An insurer's application form for a long-term care insurance policy shall include the questions listed in this Section to elicit information as to whether, as of the date of the application, the applicant has another long-term care insurance policy or certificate in force or whether a long-term care policy or certificate is intended to replace any other health or long-term care policy or certificate presently in force. An insurer may include the questions in a supplementary application or other form to be signed by the applicant and insurance producer, except where the coverage is sold without an insurance producer. For a replacement policy issued to a group as defined in A.R.S. § 20-1691(5)(a), the insurer may modify the questions only to the extent necessary to elicit information about health or long-term care insurance policies other than the group policy being replaced if the certificateholder has been notified of the replacement.
1. Do you have another long-term care insurance policy or certificate in force (including health care service contract, health maintenance organization contract)?
 2. Did you have another long-term care insurance policy or certificate in force during the last 12 months?
 - a. If so, with which company?
 - b. If that policy lapsed, when did it lapse?
 3. Are you covered by Medicaid?
 4. Do you intend to replace any of your medical or health insurance coverage with this policy or certificate?
- B.** The application or enrollment form for such policies or certificates shall clearly indicate the payment plan the applicant selects.
- C.** An insurance producer shall list any other health insurance policies the insurance producer has sold to the applicant, including:
1. Policies that are still in force, and
 2. Policies sold in the past five years that are no longer in force.
- D.** Solicitations Other than Direct Response. On determining that a sale will involve replacement, an insurer, other than an insurer using direct response solicitation methods, or its insurance producer; shall furnish the applicant, before issuing or delivering the individual long-term care insurance policy, a notice that substantially conforms to the form prescribed in Appendix C or D regarding replacement of health or long-term care coverage. The insurer shall:
1. Give one copy of the notice to the applicant, and
 2. Keep an additional copy signed by the applicant.
- E.** Direct Response Solicitations. Insurers using direct response solicitation methods as defined in A.R.S. § 20-1661 shall deliver a notice that substantially conforms to the form prescribed in Appendix C or D regarding replacement of health or long-term care coverage to the applicant upon issuance of the policy.
- F.** If replacement is intended, the replacing insurer shall send the existing insurer written notice of the proposed replacement within five working days from the date the replacing insurer receives the application or issues the policy, whichever is sooner. The notice shall identify the existing policy by name of the insurer and the insured, and policy number or insured's address including zip code.
- G.** A life insurance policy that accelerate benefits for long-term care shall comply with this Section if the policy being replaced is a long-term care insurance policy. If the policy being replaced is a life insurance policy, the insurer shall comply with the replacement requirements of Title 20, Chapter 6, Article 1.1. If a life insurance policy that accelerates benefits for long-term care is replaced by another such policy, the replacing insurer shall comply with the requirements of this Section and with A.R.S. Title 20, Chapter 6, Article 1.1.
- H.** Prohibition against preexisting conditions and probationary periods in replacement policies or certificates. If a long-term care insurance policy or certificate replaces another long-term care policy or certificate, the replacing insurer shall waive any time periods applicable to preexisting conditions and probationary periods in the new long-term care policy for similar benefits if similar exclusions are satisfied under the original policy.
- I.** Reporting requirements.
1. An insurer shall maintain the following records for each insurance producer:
 - a. The amount of the insurance producer's replacement sales as a percent of the insurance producer's total annual sales, and
 - b. The amount of lapses of long-term care insurance policies sold by the insurance producer as a percent of the insurance producer's total annual sales.
 2. No later than June 30 of each year, on the forms specified in Appendix E and Appendix F, an insurer shall report the following information for the preceding calendar year to the Department:
 - a. The 10% of its insurance producers licensed in Arizona with the greatest percentages of lapses and replacements as measured by subsection (I)(1);
 - b. The number of lapsed policies as a percent of the total annual sales and as a percent of the insurer's total number of policies in force as of the end of the preceding calendar year;
 - c. The number of replacement policies sold as a percent of the insurer's total annual sales and as a percent of its total number of policies in force as of the end of the preceding calendar year; and
 - d. For qualified long-term care insurance contracts, the number of claims denied for each class of business, expressed as a percentage of claims denied.
- J.** In subsection (I):
1. "Claim" means a request for payment of benefits under an in-force policy, regardless of whether the benefit claimed is covered under the policy or any terms or conditions of the policy have been met.
 2. "Denied" means the insurer refuses to pay a claim for any reason other than for claims not paid for failure to meet the waiting period or because of an applicable preexisting condition.
 3. "Policy" means only long-term care insurance.
 4. "Report" means on a statewide basis.
- K.** Reported replacement and lapse rates do not alone constitute a violation of insurance laws or necessarily imply wrongdoing. The reports are for the purpose of reviewing more closely agent activities regarding the sale of long-term care insurance. Reports required under this Section shall be filed with the Director.
- L.** Annual rate certification requirements. This subsection applies to any long-term care policy issued in Arizona on or after November 10, 2017. The following annual submission requirements apply subsequent to initial rate filings for indi-

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vidual long-term care insurance policies made under this Section:

1. An actuarial certification prepared, dated and signed by a member of the American Academy of Actuaries which contains a statement of the sufficiency of the current premium rate schedule, including:
 - a. For the rate schedules currently marketed, that the premium rate schedule continues to be sufficient to cover anticipated costs under moderately adverse experience and that the premium rate schedule is reasonably expected to be sustainable over the life of the form with no future premium increases anticipated or a statement that margins for moderately adverse experience may no longer be sufficient. For a statement that margins for moderately adverse experience may no longer be sufficient, the insurer shall provide to the Director, within 60 days of the date the actuarial certification is submitted to the Director, a plan of action, including a time frame, for the re-establishment of adequate margins for moderately adverse experience so that the ultimate premium rate schedule would be reasonably expected to be sustainable over the future life of the form with no future premium increases anticipated. Failure to submit a plan of action to the Director within 60 days or to comply with the time frame stated in the plan of action constitutes grounds for the Director to withdraw or modify approval of the form for future sales pursuant to A.R.S. § 20-1691.08.
 - b. For the rate schedules that are no longer marketed, that the premium rate schedule continues to be sufficient to cover anticipated costs under best estimate assumptions or that the premium rate schedule may no longer be sufficient. If the premium rate schedule is no longer sufficient, the insurer shall provide to the Director, within 60 days of the date the actuarial certification is submitted to the Director, a plan of action, including time frame, for the re-establishment of adequate margins for moderately adverse experience;
2. A description of the review performed that led to the statement; and
3. An actuarial memorandum dated and signed by a member of the American Academy of Actuaries who prepares the information shall be prepared to support the actuarial certification and provide at least the following information:
 - a. A detailed explanation of the data sources and review performed by the actuary prior to making the statement in subsection (L)(1),
 - b. A complete description of experience assumptions and their relationship to the initial pricing assumptions,
 - c. A description of the credibility of the experience data, and
 - d. An explanation of the analysis and testing performed in determining the current presence of margins.
4. The actuarial certification required pursuant to subsection (L)(1) must be based on calendar year data and submitted annually starting in the second year following the year in which the initial rate schedules are first used. The actuarial memorandum required pursuant to subsection (L)(3) must be submitted at least once every three years with the certification.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1010 recodified from R4-14-1010 (Supp. 95-1). R20-6-

1010 renumbered to R20-6-1013; new Section R20-6-1010 renumbered from R20-6-1007 and amended by final by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1011. Prohibition Against Post-claims Underwriting

- A. An application for a long-term care insurance policy or certificate that is not guaranteed issue shall meet the requirements of this Section.
 1. The application shall contain clear and unambiguous questions designed to ascertain the applicant's health condition.
 - a. If the application has a question asking whether the applicant has had medication prescribed by a physician, the application shall also ask the applicant to list the prescribed medication.
 - b. If the insurer knew or reasonably should have known that the medications listed in the application are related to a medical condition for which coverage would otherwise be denied, the insurer shall not rescind the policy or certificate for that condition.
 2. The application shall include the following language which shall be set out conspicuously and in close conjunction with the applicant's signature block: "**Caution: If your answers on this application are incorrect or untrue, [company] has the right to deny benefits or rescind your policy.**"
 3. The policy or certificate shall contain, at the time of delivery, the following language, or language substantially similar to the following, set out conspicuously: "**Caution: The issuance of this long-term care insurance [policy] [certificate] is based on your responses to the questions on your application. A copy of your [application] [enrollment form] [is enclosed] [was retained by you when you applied]. If your answers are incorrect or untrue, the company has the right to deny benefits or rescind your policy. The best time to clear up any questions is now, before a claim arises! If, for any reason, any of your answers are incorrect, contact the company at this address: [insert address].**"
- B. Before issuing a long-term care insurance policy or certificate that is not guaranteed issue to an applicant age 80 or older, the insurer shall obtain one of the following:
 1. A report of a physical examination,
 2. An assessment of functional capacity,
 3. An attending physician's statement, or
 4. Copies of medical records.
- C. The insurer or its insurance producer shall deliver a copy of the completed application or enrollment form, as applicable, to the insured no later than at the time of delivery of the policy or certificate unless the insurer gave a copy to the applicant it at the time of application.
- D. An insurer selling or issuing long-term care insurance benefits shall maintain a record of all policy or certificate rescissions, both state and country-wide, except those which the insured voluntarily effectuated.
- E. On or before March 31 of each year, an insurer shall report the following information to the Director for the preceding calendar year, using the form prescribed in Appendix G:
 1. Insurer name, address, phone number;
 2. As to each rescission except those voluntarily effectuated by the insured:
 - a. Policy form number,
 - b. Policy and certificate number,
 - c. Name of the insured,

- d. Date of policy issuance,
 - e. Date claim submitted,
 - f. Date of rescission, and
 - g. Detailed reason for rescission; and
3. Signature, name and title of the preparer, and date prepared.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1011 recodified from R4-14-1011 (Supp. 95-1). R20-6-1011 renumbered to R20-6-1014; new Section R20-6-1011 renumbered from R20-6-1008 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1012. Reserve Standards

- A. If long-term care benefits are provided through the acceleration of benefits under group or individual life policies or riders, an insurer shall determine policy reserves for long-term care benefits under A.R.S. § 20-510. An insurer shall also establish claim reserves for a policy or rider in claim status.
- B. An insurer shall base reserves for policies and riders under subsection (A) on the multiple decrement model using all relevant decrements except for voluntary termination rates. An insurer may use single decrement approximations if the calculation produces essentially similar reserves, if the reserve is clearly more conservative, or if the reserve is immaterial. The insurer, when calculating reserves, may take into account the reduction in life insurance benefits due to the payment of long-term care benefits. The insurer shall not set the reserves for the long-term care benefit and the life insurance benefit to be less than the reserves for the life insurance benefit assuming no long-term care benefit.
- C. In the development and calculation of reserves for policies and riders subject to this Section, an insurer shall give due regard to the applicable policy provisions, marketing methods, administrative procedures and all other considerations which impact projected claim costs including the following:
 - 1. Definition of insured events,
 - 2. Covered long-term care facilities,
 - 3. Existence of home convalescence care coverage,
 - 4. Definition of facilities,
 - 5. Existence or absence of barriers to eligibility,
 - 6. Premium waiver provision,
 - 7. Renewability,
 - 8. Ability to raise premiums,
 - 9. Marketing method,
 - 10. Underwriting procedures,
 - 11. Claims adjustment procedures,
 - 12. Waiting period,
 - 13. Maximum benefit,
 - 14. Availability of eligible facilities,
 - 15. Margins in claim costs,
 - 16. Optional nature of benefit,
 - 17. Delay in eligibility for benefit,
 - 18. Inflation protection provisions,
 - 19. Guaranteed insurability option, and
 - 20. Other similar or comparable factors affecting risk.
- D. A member of the American Academy of Actuaries shall certify an insurer's use of any applicable valuation morbidity table as appropriate as a statutory valuation table.
- E. When long-term care benefits are provided other than as described in subsection (A), an insurer shall determine reserves under A.R.S. § 20-508.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-

1012 recodified from R4-14-1012 (Supp. 95-1). R20-6-1012 renumbered to R20-6-1016; new Section R20-6-1012 renumbered from R20-6-1009 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Section repealed; new Section renumbered from R20-6-1013 and amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1013. Loss Ratio

- A. This Section applies to policies and certificates issued any time prior to May 10, 2005.
- B. Benefits under an individual long-term care insurance policy are deemed reasonable in relation to premiums if the expected loss ratio is at least 60% calculated in a manner that provides for adequate reserving of the long-term care insurance risk. In evaluating the expected loss ratio, the director shall consider all relevant factors, including:
 - 1. Statistical credibility of incurred claims experience and earned premiums;
 - 2. The period for which rates are computed to provide coverage;
 - 3. Experienced and projected trends;
 - 4. Concentration of experience within early policy duration;
 - 5. Expected claim fluctuation;
 - 6. Experience refunds, adjustments, or dividends;
 - 7. Renewability features;
 - 8. All appropriate expense factors;
 - 9. Interest;
 - 10. Experimental nature of the coverage;
 - 11. Policy reserves;
 - 12. Mix of business by risk classification; and
 - 13. Product features such as long elimination periods, high deductibles, and high maximum limits.
- C. A premium rate schedule or proposed revision to a premium rate schedule that is expected to produce, over the lifetime of the long-term care insurance policy, benefits that are less than 60% of the proposed premium rate schedule is deemed to be unreasonable.
- D. Subsections (B) and (C) do not apply to life insurance policies that accelerate benefits for long-term care. A life insurance policy that funds long-term care benefits entirely by accelerating the death benefit is deemed to provide reasonable benefits in relation to premiums paid if the policy complies with all of the following:
 - 1. The interest credited internally to determine cash value accumulations, including long-term care, if any, is guaranteed not to be less than the minimum guaranteed interest rate for cash value accumulations without long-term care set forth in the policy;
 - 2. The portion of the policy that provides life insurance benefits complies with the nonforfeiture requirements of A.R.S. § 20-1231;
 - 3. The policy complies with the disclosure requirements of A.R.S. § 20-1691.06(A) through (E);
 - 4. At the time of making a filing under A.R.S. § 20-1691.08, the insurer files an actuarial memorandum that includes the following information:
 - a. A description of the basis on which the long-term care rates were determined;
 - b. A description of the basis for the reserves;
 - c. A summary of the type of policy, benefits, renewability, general marketing method, and limits on ages of issuance;
 - d. A description and a table of each actuarial assumption used; for expenses, an insurer shall include per-

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- cent of premium dollars per policy and dollars per unit of benefits, if any;
- e. A description and a table of the anticipated policy reserves and additional reserves to be held in each future year for active lives;
 - f. The estimated average annual premium per policy and the average issue age;
 - g. A statement as to whether underwriting is performed, including:
 - i. Time of underwriting;
 - ii. A description of the type of underwriting used, such as medical underwriting or functional assessment underwriting; and
 - iii. For a group policy, whether an enrollee's dependents are subject to underwriting; and
 - h. A description of the effect of the long-term care policy provisions on the required premiums, nonforfeiture values, and reserves on the underlying life insurance policy, both for active lives and those in long-term care claim status.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1013 recodified from R4-14-1013 (Supp. 95-1). Section R20-6-1013 renumbered to R20-6-1017; new Section R20-6-1013 renumbered from R20-6-1010 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Section R20-6-1013 renumbered to R20-6-1012; new Section R20-6-1013 renumbered from R20-6-1014 and amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1014. Premium Rate Schedule Increase

- A. This Section applies to any long-term care policy or certificate issued in this state on or after May 10, 2005 and prior to November 10, 2017.
- B. An insurer shall notify the Director of a proposed premium rate schedule increase, including an exceptional increase, at least 60 days before issuing notice to its policyholders. The notice to the Director shall include:
 1. Information required by R20-6-1008;
 2. Certification by a qualified actuary that:
 - a. If the requested premium rate schedule increase is implemented and the underlying assumptions, which reflect moderately adverse conditions, are realized, no further premium rate schedule increases are anticipated;
 - b. The premium rate filing complies with the provisions of this Section; and
 - c. The insurer may request a premium rate schedule increase less than what is required under this Section and the Director may approve the premium rate schedule increase, without submission of the certification required by subsection (B)(2)(a), if the actuarial memorandum discloses the premium rate schedule increase necessary to make the certification required by subsection (B)(2)(a), the premium rate schedule increase filing satisfies all other requirements of this Section, and is, in the opinion of the Director, in the best interest of the policyholders.
 3. An actuarial memorandum justifying the rate schedule change request that includes:
 - a. Lifetime projections of earned premiums and incurred claims based on the filed premium rate schedule increase; and the method and assumptions used in determining the projected values, including the following:
 - i. Any assumptions that deviate from those used for pricing other forms currently available for sale;
 - ii. Annual values for the five years preceding and the three years following the valuation date, provided separately;
 - iii. Development of the lifetime loss ratio, unless the rate increase is an exceptional increase; and
 - iv. A demonstration of compliance with subsection (C).
 - b. For exceptional increases, the actuarial memorandum shall also include:
 - i. The projected experience that is limited to the increases in claims expenses attributable to the approved reasons for the exceptional increase; and
 - ii. If the Director determines under Section R20-6-1002(B)(3) that offsets may exist, the insurer shall use appropriate net projected experience;
 - c. Disclosure of how reserves have been incorporated in this rate increase when the rate increase will trigger contingent benefit upon lapse;
 - d. Disclosure of the analysis performed to determine why a rate adjustment is necessary, which pricing assumptions were not realized and why, and any other actions of the insurer on which the actuary has relied;
 - e. A statement that the actuary has considered policy design, underwriting, and claims adjudication practices;
 - f. Composite rates reflecting projections of new certificates in the event it is necessary to maintain consistent premium rates for new certificates and certificates receiving a rate increase; and
 - g. A demonstration that actual and projected costs exceed costs anticipated at the time of the initial pricing under moderately adverse experience and that the composite margin specified in R20-6-1009(B)(4) is projected to be exhausted;
4. A statement that renewal premium rate schedules are not greater than new business premium rate schedules except for differences attributable to benefits, unless the insurer provides the Director with documentation justifying the greater rate; and
5. Upon the Director's request, other similar and related information the Director may require to evaluate the premium rate schedule increase.
- C. All premium rate schedule increases shall be determined in accordance with the following requirements:
 1. The insurer shall return 70% of the present value of projected additional premiums from an exceptional increase to policyholders in benefits;
 2. The sum of the accumulated value of incurred claims, without the inclusion of active life reserves, and the present value of future projected incurred claims, without the inclusion of active life reserves, shall not be less than the sum of the following:
 - a. The accumulated value of the initial earned premium times 58%;
 - b. 85% of the accumulated value of prior premium rate schedule increases on an earned basis;
 - c. The present value of future projected initial earned premiums times 58%; and

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- d. 85% of the present value of future projected premiums not in subsection (C)(2)(c) on an earned basis;
3. If a policy form has both exceptional and other increases, the values in subsections (C)(2)(b) and (C)(2)(d) shall also include 70% for exceptional rate increase amounts; and
 4. All present and accumulated values used to determine rate increases shall use the maximum valuation interest rate for contract reserves as specified in the NAIC Accounting Practices and Procedures Manual to which insurers are subject under A.R.S. § 20-223. The actuary shall disclose the use of any appropriate averages in the actuarial memorandum required under subsection (B)(3).
- D.** For each rate increase that is implemented, the insurer shall file for approval by the Director updated projections, as defined in subsection (B)(3)(a), annually for the next three years and shall include a comparison of actual results to projected values. The Director may extend the period to greater than three years if actual results are not consistent with projected values from prior projections. For group insurance policies that meet the conditions in subsection (M), the insurer shall provide the projections required by this subsection to the policyholder in lieu of filing with the Director.
- E.** If any premium rate in the revised premium rate schedule is greater than 200% of the comparable rate in the initial premium schedule, the insurer shall file lifetime projections, as defined in subsection (B)(3)(a), for the Director's approval every five years following the end of the required period in subsection (D). For group insurance policies that meet the conditions in subsection (M), the insurer shall provide the projections required by this subsection to the policyholder instead of filing with the Director.
- F.** If the Director finds that the actual experience following a rate increase does not adequately match the projected experience and that the current projections under moderately adverse conditions demonstrate that incurred claims will not exceed proportions of premiums specified in subsection (C), the Director may require the insurer to implement premium rate schedule adjustments or other measures to reduce the difference between the projected and actual experience. In determining whether the actual experience matches the projected experience, the Director shall consider subsection (B)(3)(f), if applicable.
- G.** If the majority of the policies or certificates to which the increase applies are eligible for the contingent benefit upon lapse, the insurer shall file:
1. A plan, subject to Director approval, for improved administration or claims processing designed to eliminate the potential for further deterioration of the policy form experience requiring further premium rate schedule increases, or both, or to demonstrate that appropriate administration and claims processing have been implemented or are in effect; otherwise the Director may impose the conditions in subsections (H) through (J); and
 2. The original anticipated lifetime loss ratio, and the premium rate schedule increase that would have been calculated according to subsection (C) had the greater of the original anticipated lifetime loss ratio or 58% been used in the calculations described in subsections (C)(2)(a) and (C)(2)(c).
- H.** For a rate increase filing that meets the criteria listed in this subsection, the Director shall review, for all policies included in the filing, the projected lapse rates and past lapse rates during the 12 months following each increase to determine if lapsation in excess of projected lapsation has occurred or is anticipated:
1. The rate increase is not the first rate increase requested for the specific policy form or forms,
 2. The rate increase is not an exceptional increase, and
 3. The majority of the policies or certificates to which the increase applies are eligible for the contingent benefit upon lapse.
- I.** If the Director finds excess lapsation under subsection (H) has occurred, is anticipated in the filing or is evidenced in the actual results as presenting in the updated projections provided by the insurer following the requested rate increase, the Director may find that a rate spiral exists and may require the insurer to offer, without underwriting, to all in-force insureds subject to the rate increase, the option to replace existing coverage with one or more reasonably comparable products being offered by the insurer or its affiliates. The information communicating the offer is subject to the Director's approval. The offer shall:
1. Be based on actuarially sound principles, but not on attained age;
 2. Provide that maximum benefits under any new policy accepted by an insured shall be reduced by comparable benefits already paid under the existing policy; and
 3. Allow the insured the option of retaining the existing coverage.
- J.** The insurer shall maintain the experience of the insureds whose coverage was replaced under subsection (I) separate from the experience of insureds originally issued the policy forms. If the insurer requests a rate increase on the policy form, the rate increase shall be limited to the lesser of:
1. The maximum rate increase determined based on the combined experience; and
 2. The maximum rate increase determined based only on the experience of the insureds originally issued the form, plus 10%.
- K.** If the Director finds that an insurer has exhibited a history or pattern of filing inadequate initial premium rates for long-term care insurance, after considering the total number of policies filed over a period of time and the percentage of policies with inadequate rates, the Director may, in addition to remedies available under subsections (H) through (J), prohibit the insurer from the following:
1. Filing and marketing comparable coverage for a period of up to five years, and
 2. Offering all other similar coverages and limiting marketing of new applications to the products subject to recent premium rate schedule increases.
- L.** Subsections (A) through (K) shall not apply to a policy for which long-term care benefits provided by the policy are incidental, as defined under R20-6-1002(C), if the policy complies with all of the following provisions:
1. The interest credited internally to determine cash value accumulations, including long-term care, if any, are guaranteed not to be less than the minimum guaranteed interest rate for cash value accumulations without long-term care set forth in the policy;
 2. The portion of the policy that provides insurance benefits other than long-term care coverage meets the applicable nonforfeiture requirements under state law, including A.R.S. §§ 20-1231, 20-1232 and 20-2636;
 3. The policy meets the disclosure requirements of A.R.S. § 20-1691.06;
 4. The portion of the policy that provides insurance benefits other than long-term care coverage meets the disclosure requirements as applicable in the following:
 - a. A.R.S. Title 20, Chapter 6, Article 1.2; and
 - b. A.R.S. Title 20, Chapter 16, Article 2;

5. At the time of making a filing under A.R.S. § 20-1691.08, the insurer files an actuarial memorandum that includes:
 - a. Description of the bases on which the actuary determined the long-term care rates and the reserves;
 - b. A summary of the type of policy, benefits, renewability provisions, general marketing method, and limits on ages of issuance;
 - c. A description and a table of each actuarial assumption used, with the percent of premium dollars per policy and dollars per unit of benefits, if any, for expenses;
 - d. A description and a table of the anticipated policy reserves and additional reserves to be held in each future year for active lives;
 - e. The estimated average annual premium per policy and the average issue age;
 - f. A statement as to whether the insurer performs underwriting at the time of application with an explanation of the following:
 - i. Whether underwriting is used, and if used, a description of the type of underwriting, such as medical underwriting or functional assessment underwriting; and
 - ii. For a group policy, whether the enrollee or any dependent will be underwritten and when underwriting occurs; and
 - g. A description of the effect of the long-term care policy provision on the required premiums, nonforfeiture values, and reserves on the underlying insurance policy, both for active lives and those in long-term care claim status.
- M.** Subsections (F) and (H) through (J) shall not apply to group insurance as defined in A.R.S. § 20-1691(6) where:
1. The policies insure 250 or more persons and the policyholder has 5,000 or more eligible employees of a single employer; or
 2. The policyholder, and not the certificateholder, pays a material portion of the premium, which shall not be less than 20% of the total premium for the group in the calendar year prior to the year a rate increase is filed.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1014 recodified from R4-14-1014 (Supp. 95-1). Section repealed; R20-6-1014 renumbered from R20-6-1011 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Section R20-6-1014 renumbered to R20-6-1013; new Section R20-6-1014 renumbered from R20-6-1015 and amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1015. Premium Rate Schedule Increases for Policies Subject to Loss Ratio Limits Related to Original Filings

- A.** This Section applies to any long-term care policy or certificate issued in this state on or after November 10, 2017.
 - B.** An insurer shall notify the Director of a proposed premium rate schedule increase, including an exceptional increase, at least 60 days before issuing notice to its policyholders. The notice to the Director shall include:
 1. Information required by R20-6-1008;
 2. Certification by a qualified actuary that:
 - a. If the requested premium rate schedule increase is implemented and the underlying assumptions, which reflect moderately adverse conditions, are realized, no further premium rate schedule increases are anticipated;
 - b. The premium rate filing complies with the provisions of this Section; and
 - c. The insurer may request a premium rate schedule increase less than what is required under this Section and the Director may approve the premium rate schedule increase, without submission of the certification required by subsection (B)(2)(a), if the actuarial memorandum discloses the premium rate schedule increase necessary to make the certification required by subsection (B)(2)(a), the premium rate schedule increase filing satisfies all other requirements of this Section, and is, in the opinion of the Director, in the best interest of the policyholders.
3. An actuarial memorandum justifying the rate schedule change request that includes:
- a. Lifetime projections of earned premiums and incurred claims based on the filed premium rate schedule increase; and the method and assumptions used in determining the projected values, including the following:
 - i. Any assumptions that deviate from those used for pricing other forms currently available for sale;
 - ii. Annual values for the five years preceding and the three years following the valuation date, provided separately;
 - iii. Development of the lifetime loss ratio, unless the rate increase is an exceptional increase; and
 - iv. A demonstration of compliance with subsection (C).
 - b. For exceptional increases, the actuarial memorandum shall also include:
 - i. The projected experience that is limited to the increases in claims expenses attributable to the approved reasons for the exceptional increase; and
 - ii. If the Director determines under Section R20-6-1002(B)(3) that offsets may exist, the insurer shall use appropriate net projected experience;
 - c. Disclosure of how reserves have been incorporated in this rate increase when the rate increase will trigger contingent benefit upon lapse;
 - d. Disclosure of the analysis performed to determine why a rate adjustment is necessary, which pricing assumptions were not realized and why, and any other actions of the insurer on which the actuary has relied;
 - e. A statement that the actuary has considered policy design, underwriting, and claims adjudication practices;
 - f. Composite rates reflecting projections of new certificates in the event it is necessary to maintain consistent premium rates for new certificates and certificates receiving a rate increase; and
 - g. A demonstration that actual and projected costs exceed costs anticipated at the time of the initial pricing under moderately adverse experience and that the composite margin specified in R20-6-1009(B)(4) is projected to be exhausted.
4. A statement that renewal premium rate schedules are not greater than new business premium rate schedules except for differences attributable to benefits, unless the insurer provides the Director with documentation justifying the greater rate; and

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5. Upon the Director's request, other similar and related information the Director may require to evaluate the premium rate schedule increase.
- C.** All premium rate schedule increases shall be determined in accordance with the following requirements:
1. Exceptional increases shall provide that 70% of the present value of projected additional premiums from the exceptional increase will be returned to policyholders in benefits;
 2. The insurer shall calculate premium rate increases such that the sum of the lesser of either the accumulated value of the actual incurred claims (without the inclusion of active life reserves) or the accumulated value of historic expected claims (without the inclusion of active life reserves) plus the present value of the future expected incurred claims (projected without the inclusion of active life reserves) will not be less than the sum of the following:
 - a. The accumulated value of the initial earned premium times the greater of 58% or the lifetime loss ratio consistent with the original filing including margins for moderately adverse experience;
 - b. 85% of the accumulated value of prior premium rate schedule increases on an earned basis;
 - c. The present value of future projected initial earned premiums times the greater of 58% or the lifetime loss ratio consistent with the original filing including margins for moderately adverse experience; and
 - d. 85% of the present value of future projected premiums not in subsection (C)(2)(c) on an earned basis;
 3. Historic expected claims shall be calculated based on the original filing assumptions assumed until new assumptions are filed as part of a rate increase. New assumptions shall be used for all periods beyond each requested effective date of a rate increase. Historic expected claims are calculated for each calendar year based on the in-force at the beginning of the calendar year. Historic expected claims shall include margins for moderately adverse experience; either amounts included in the claims that were used to determine the lifetime loss ratio consistent with the original filing or as modified in any rate increase filing;
 4. In the event that a policy form has both exceptional and other increases, the values in subsections (C)(2)(b) and (C)(2)(d) will also include 70% for exceptional rate increase amounts; and
 5. All present and accumulated values used to determine rate increases, including the lifetime loss ratio consistent with the original filing reflecting margins for moderately adverse experience, shall use the maximum valuation interest rate for contract reserves as specified in A.R.S. § 20-508. The actuary shall disclose as part of the actuarial memorandum the use of any appropriate averages.
- D.** For each rate increase that is implemented, the insurer shall file for approval by the Director updated projections, as defined in subsection (B)(3)(a), annually for the next three years and shall include a comparison of actual results to projected values. The Director may extend the reporting period beyond three years if actual results are not consistent with projected values from prior projections. For group insurance policies that meet the conditions in subsection (M), the projections required by this subsection shall be provided to the policyholder in lieu of filing with the Director.
- E.** If any premium rate in the revised premium rate schedule is greater than 200% of the comparable rate in the initial premium schedule, the insurer shall file lifetime projections, as defined in subsection (B)(3)(a), for the Director's approval every five years following the end of the required period in subsection (D). For group insurance policies that meet the conditions in subsection (M), the insurer shall provide the projections required by this subsection to the policyholder instead of filing with the Director.
- F.** If the Director finds that the actual experience following a rate increase does not adequately match the projected experience and that the current projections under moderately adverse conditions demonstrate that incurred claims will not exceed proportions of premiums specified in subsection (C), the Director may require the insurer to implement premium rate schedule adjustments or other measures to reduce the difference between the projected and actual experience. In determining whether the actual experience matches the projected experience, the Director shall consider subsection (B)(3)(f), if applicable.
- G.** If the majority of policies or certificates to which the increase is applicable are eligible for the contingent benefit upon lapse, the insurer shall file a plan, subject to approval by the Director, for improved administration or claims processing designed to eliminate the potential for further deterioration of the policy form experience requiring further premium rate schedule increases, or both, or to demonstrate that appropriate administration and claims processing have been implemented or are in effect. Otherwise, the Director may impose the conditions in subsections (H) through (J).
- H.** For a rate increase filing that meets the criteria listed in this subsection, the Director shall review, for all policies included in the filing, the projected lapse rates and past lapse rates during the 12 months following each increase to determine if lapsation in excess of projected lapsation has occurred or is anticipated:
 1. The rate increase is not the first rate increase requested for the specific policy form or forms;
 2. The rate increase is not an exceptional increase; and
 3. The majority of the policies or certificates to which the increase applies are eligible for the contingent benefit upon lapse.
- I.** If the Director finds excess lapsation under subsection (H) has occurred, is anticipated in the filing or is evidenced in the actual results as presenting in the updated projections provided by the insurer following the requested rate increase, the Director may find that a rate spiral exists and may require the insurer to offer, without underwriting, to all in-force insureds subject to the rate increase, the option to replace existing coverage with one or more reasonably comparable products being offered by the insurer or its affiliates. The information communicating the offer is subject to the Director's approval. The offer shall:
 1. Be based on actuarially sound principles, but not on attained age; and
 2. Provide that maximum benefits under any new policy accepted by an insured shall be reduced by comparable benefits already paid under the existing policy; and
 3. Allow the insured the option of retaining the existing coverage.
- J.** The insurer shall maintain the experience of the insureds whose coverage was replaced under subsection (I) separate from the experience of insureds originally issued the policy forms. If the insurer requests a rate increase on the policy form, the rate increase shall be limited to the lesser of:
 1. The maximum rate increase determined based on the combined experience; and

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2. The maximum rate increase determined based only on the experience of the insureds originally issued the form, plus 10%.
- K.** If the Director finds that an insurer has exhibited a history or pattern of filing inadequate initial premium rates for long-term care insurance, after considering the total number of policies filed over a period of time and the percentage of policies with inadequate rates, the Director may, in addition to remedies available under subsections (H) through (J), prohibit the insurer from the following:
1. Filing and marketing comparable coverage for a period of up to five years; and
 2. Offering all other similar coverages and limiting marketing of new applications to the products subject to recent premium rate schedule increases.
- L.** Subsections (A) through (K) shall not apply to a policy for which long-term care benefits provided by the policy are incidental, as defined under R20-6-1002(C), if the policy complies with all of the following provisions:
1. The interest credited internally to determine cash value accumulations, including long-term care, if any, are guaranteed not to be less than the minimum guaranteed interest rate for cash value accumulations without long-term care set forth in the policy;
 2. The portion of the policy that provides insurance benefits other than long-term care coverage meets the applicable nonforfeiture requirements under state law, including A.R.S. §§ 20-1231, 20-1232 and 20-2636;
 3. The policy meets the disclosure requirements of A.R.S. § 20-1691.06;
 4. The portion of the policy that provides insurance benefits other than long-term care coverage meets the disclosure requirements as applicable in the following:
 - a. A.R.S. Title 20, Chapter 6, Article 1.2; and
 - b. A.R.S. Title 20, Chapter 16, Article 2.
 5. At the time of making a filing under A.R.S. § 20-1691.08, the insurer files an actuarial memorandum that includes:
 - a. Description of the bases on which the actuary determined the long-term care rates and the reserves;
 - b. A summary of the type of policy, benefits, renewability provisions, general marketing method, and limits on ages of issuance;
 - c. A description and a table of each actuarial assumption used, with the percent of premium dollars per policy and dollars per unit of benefits, if any, for expenses;
 - d. A description and a table of the anticipated policy reserves and additional reserves to be held in each future year for active lives;
 - e. The estimated average annual premium per policy and the average issue age;
 - f. A statement as to whether the insurer performs underwriting at the time of application with an explanation of the following:
 - i. Whether underwriting is used, and if used, a description of the type of underwriting, such as medical underwriting or functional assessment underwriting; and
 - ii. For a group policy, whether the enrollee or any dependent will be underwritten and when underwriting occurs; and
 - g. A description of the effect of the long-term care policy provision on the required premiums, nonforfeiture values, and reserves on the underlying insurance policy, both for active lives and those in long-term care claim status.
- M.** Subsections (F) and (H) through (J) shall not apply to group insurance as defined in A.R.S. § 20-1691(6) where:
1. The policies insure 250 or more persons and the policyholder has 5,000 or more eligible employees of a single employer; or
 2. The policyholder, and not the certificateholder, pays a material portion of the premium, which shall not be less than 20% of the total premium for the group in the calendar year prior to the year a rate increase is filed.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1015 recodified from R4-14-1015 (Supp. 95-1). Section R20-6-1015 renumbered to R20-6-1022; new Section R20-6-1015 made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Section R20-6-1015 renumbered to R20-6-1014; new Section R20-6-1015 made by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1016. Filing Requirements for Group Policies

- A.** Out-of-State Policies. Before an insurer or similar organization may offer group long-term care insurance to a resident of this state under A.R.S. § 20-1691.02(D), the insurer or organization shall file with the Director evidence that a state with statutory or regulatory long-term care insurance requirements substantially similar to those of this state has approved the group policy or certificate for use in that state.
- B.** Associations. For long-term policies marketed or issued to associations, the insurer or organization shall file with the insurance department the policy, certificate, and corresponding outline of coverage.

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). R20-6-1016 recodified from R4-14-1016 (Supp. 95-1). Section R20-6-1016 renumbered to R20-6-1023; new Section R20-6-1016 renumbered from R20-6-1012 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4).

R20-6-1017. Standards for Marketing

- A.** Every insurer marketing long-term care insurance coverage in this state, directly or through an insurance producer shall:
1. Establish marketing procedures to assure that any comparison of policies by its insurance producers is fair and accurate, and that excessive insurance is not sold or issued;
 2. Display prominently by type, stamp or other appropriate means, on the first page of the outline of coverage and policy, the following language: "Notice to buyer: This policy may not cover all of the costs associated with long-term care incurred by the buyer during the period of coverage. The buyer is advised to review carefully all policy limitations;"
 3. Provide the applicant with copies of the disclosure forms in Appendices A and B;
 4. Inquire and otherwise make every reasonable effort to identify whether a prospective applicant or enrollee for long-term care insurance already has health or long-term care insurance and the types and amounts of any such insurance;
 5. Provide an explanation of contingent benefit upon lapse as provided for in R20-6-1019(D)(3);
 6. Provide written notice to an applicant or prospective policyholder or certificateholder advising of this state's senior insurance counseling program (SHIP), and the

name, address, and phone number for the SHIP, at the time of solicitation; and

7. Establish auditable procedures for verifying compliance with this subsection (A).

B. In addition to the practices prohibited in A.R.S. § 20-441 et seq., the following acts and practices are prohibited:

1. **Twisting.** Knowingly making any misleading representation or incomplete or fraudulent comparison of any insurance policies or insurers for the purpose of inducing, or tending to induce, any person to lapse, forfeit, surrender, terminate, retain, pledge, assign, borrow on, or convert any insurance policy or to take out a policy of insurance with another insurer.
2. **High pressure tactics.** Employing any method of marketing having the effect of or tending to induce the purchase of insurance through force, fright, threat, whether explicit or implied, or undue pressure to purchase or recommend the purchase of insurance.
3. **Cold lead advertising.** Making use directly or indirectly or any method of marketing that fails to disclose in a conspicuous manner that a purpose of the method of marketing is solicitation of insurance and that contact will be made by an insurance producer or insurance company.
4. **Misrepresentation.** Misrepresenting a material fact in selling or offering to sell a long-term care insurance policy.

C. An insurer shall not market or issue a long-term care policy or certificate to an association unless the insurer files the information required under R20-6-1016(B) and annually certifies that the association has complied with the requirements of this Section.

Historical Note

New section R20-5-1017 renumbered from R20-6-1013 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1018. Suitability

- A.** This Section does not apply to life insurance policies that accelerate benefits for long-term care.
- B.** Every insurer or other person marketing long-term care insurance, including an insurance producer or managing general agent, (the “issuer”) shall:
 1. Develop and use suitability standards to determine whether the purchase or replacement of long-term care insurance is appropriate for the needs of the applicant,
 2. Train its insurance producers in the use of its suitability standards, and
 3. Maintain a copy of its suitability standards and make them available for inspection upon the Director’s request.
- C.** To determine whether an applicant meets an issuer’s suitability standards, the insurance producer and issuer shall develop procedures that take the following into consideration:
 1. The applicant’s ability to pay for the proposed coverage and other pertinent financial information related to the purchase of the coverage;
 2. The applicant’s goals or needs with respect to long-term care and the advantages and disadvantages of insurance to meet these goals or needs; and
 3. The values, benefits, and costs of the applicant’s existing insurance, if any, when compared to the values, benefits, and costs of the recommended purchase or replacement.
- D.** The issuer shall make reasonable efforts to obtain the information set out in subsection (C), including giving the applicant the “Long-Term Care Insurance Personal Worksheet” pre-

scribed in Appendix A, to complete before or at the time of application. The issuer shall use a personal worksheet that contains, at a minimum, the information contained in Appendix A, in substantially the same text and format, in not less than 12 point type. The issuer may ask the applicant to provide additional information to comply with its suitability standards. An issuer shall file a copy of its personal worksheet with the Director.

- E.** An issuer shall not consider an applicant for coverage until the issuer has received the applicant’s completed personal worksheet, except the personal worksheet need not be returned for sales of employer group long-term care insurance to employees and their spouses.
- F.** No one shall sell or disseminate information obtained through the personal worksheet outside the issuer that obtains the worksheet.
- G.** The issuer shall use its suitability standards to determine whether issuance of long-term care insurance coverage to a particular applicant is appropriate.
- H.** An insurance producer shall use the suitability standards developed by the issuer in marketing long-term care insurance.
- I.** When giving an applicant a personal worksheet, the issuer shall also provide the applicant with a disclosure form entitled “Things You Should Know Before You Buy Long-Term Care Insurance.” The form shall be in substantially the same format and text contained in Appendix H, in not less than 12 point type.
- J.** If the issuer determines that the applicant does not meet its financial suitability standards, or if the applicant has declined to provide the information, the issuer may reject the application. In the alternative, the issuer shall send the applicant a letter that is substantially similar to Appendix I. However, if the applicant has declined to provide financial information, the issuer may use some other method to verify the applicant’s intent to purchase the long-term care policy. The issuer shall have either the applicant’s returned Appendix I letter or a record of the alternative method of verification as part of the applicant’s file.
- K.** The issuer shall report annually to the Director the total number of applications received from residents of this state, the number of those who declined to provide information on the personal worksheet, the number of applicants who did not meet the suitability standards, and the number of those who chose to confirm after receiving a suitability letter as prescribed in subsection (J).

Historical Note

New Section made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1019. Nonforfeiture Benefit Requirement

- A.** This Section does not apply to life insurance policies or riders containing accelerated long-term care benefits.
- B.** To comply with the requirement to offer a nonforfeiture benefit pursuant to the provisions of A.R.S. § 20-1691.11, an insurer shall meet the following requirements:
 1. A policy or certificate offered with nonforfeiture benefits shall have the same coverage elements, eligibility, benefit triggers and benefit length as a policy or certificate issued without nonforfeiture benefits. The nonforfeiture benefit included in the offer shall be the benefit described in subsection (E); and
 2. The offer shall be in writing if the nonforfeiture benefit is not otherwise described in the Outline of Coverage or other materials given to the prospective policyholder.

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C. If the offer required to be made under A.R.S. § 20-1691.11 is rejected, the insurer shall provide the contingent benefit upon lapse described in this Section. Even if the non-forfeiture benefit offer is accepted for a policy with a fixed or limited premium paying period, the contingent benefit on lapse in subsection (D)(4) shall still apply.

D. Contingent Benefit Upon Lapse.

1. If a prospective policyholder rejects the offer of a nonforfeiture benefit, the insurer shall provide the contingent benefit upon lapse described in this Section for individual and group policies without the nonforfeiture benefit, issued after January 10, 2005.
2. If a group policyholder elects to make the nonforfeiture benefit an option to a certificateholder, the certificate shall provide either the nonforfeiture benefit or the contingent benefit upon lapse.
3. The contingent benefit on lapse is triggered when:
 - a. An insurer increases the premium rates to a level that results in a cumulative increase of the annual premium equal to or exceeding the percentage of the insured's initial annual premium set forth in the chart below, based on the insured's issue age; and
 - b. The policy or certificate lapses within 120 days of the due date of the increased premium.
 - c. Unless otherwise required, an insurer shall notify policyholders at least 30 days before the due date of the premium reflecting the rate increase.

Triggers for a Substantial Premium Increase	
Issue Age	Percent Increase Over Initial Premium
29 and under	200%
30-34	190%
35-39	170%
40-44	150%
45-49	130%
50-54	110%
55-59	90%
60	70%
61	66%
62	62%
63	58%
64	54%
65	50%
66	48%
67	46%
68	44%
69	42%
70	40%
71	38%
72	36%
73	34%
74	32%
75	30%
76	28%
77	26%
78	24%
79	22%

80	20%
81	19%
82	18%
83	17%
84	16%
85	15%
86	14%
87	13%
88	12%
89	11%
90 and over	10%

4. A contingent benefit on lapse is also triggered for policies with a fixed or limited premium paying period when:
 - a. An insurer increases the premium rates to a level that results in a cumulative increase of the annual premium equal to or exceeding the percentage of the insured's initial annual premium set forth in the chart below, based on the insured's issue age; and
 - b. The policy or certificate lapses within 120 days of the due date of the increased premium; and
 - c. The ratio in subsection (D)(6)(b) is 40% or more.
 - d. Unless otherwise required, an insurer shall notify policyholders at least 30 days before the due date of the premium reflecting the rate increase.

Triggers for a Substantial Premium Increase on policies with a fixed or limited premium paying period	
Issue Age	Percent Increase Over Initial Premium
Under 65	50%
65-80	30%
Over 80	10%

- e. This provision shall be in addition to the contingent benefit provided by subsection (D)(3) and where both are triggered, the benefit provided shall be at the option of the insured.
5. On or before the effective date of a substantial premium increase as defined in subsection (D)(3), an insurer shall:
 - a. Offer the insured the option of reducing policy benefits under the current coverage consistent with the requirements of R20-6-1025 so that required premium payments are not increased;
 - b. Offer to convert the coverage to a paid-up status with a shortened benefit period according to the terms of subsection (E), which the insured may elect at any time during the 120-day period referenced in subsection (D)(3); and
 - c. Notify the policyholder or certificateholder that a default or lapse at any time during the 120-day period referenced in subsection (D)(3) is deemed to be the election of the offer to convert under subsection (5)(b) unless the automatic option in subsection (D)(6)(c) applies.
6. On or before the effective date of a substantial premium increase on policies with a fixed or limited premium paying period as defined in subsection (D)(4), an insurer shall:
 - a. Offer the insured the option of reducing policy benefits under the current coverage consistent with the requirements of R20-6-1025 so that required premium payments are not increased;

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- b. Offer to convert the coverage to paid-up status where the amount payable for each benefit is 90% of the amount payable in effect immediately prior to lapse times the ratio of the number of completed months of paid premiums divided by the number of months in the premium paying period. The insured may elect this option at any time during the 120-day period referenced in subsection (D)(4); and
- c. Notify the policyholder or certificateholder that a default or lapse at any time during the 120-day period referenced in subsection (D)(4) is deemed to be the election of the offer to convert under subsection (D)(6)(b) if the ratio is 40% or more.
7. For any long-term care policy issued on or after November 10, 2017, that an insurer issued at least 20 years prior to the effective date of a substantial premium increase, the insurer shall use a rate increase value of 0% in place of all values in the above tables.
- E.** Benefits continued as nonforfeiture benefits, including contingent benefits upon lapse in accordance with subsection (D)(3) but not subsection (D)(4), mean any of the following:
1. Attained age rating is defined as a schedule of premiums starting from the issue date that increases age at least 1% per year before age 50, and at least 3% per year beyond age 50.
 2. For purposes of this subsection, the nonforfeiture benefit shall be of a shortened benefit period providing paid-up long-term care insurance coverage after lapse. The same benefits (amounts and frequency in effect at the time of lapse but not increased thereafter) will be payable for a qualifying claim, but the lifetime maximum dollars or days of benefits shall be determined as specified in subsection (E)(3).
 3. The standard nonforfeiture credit equals 100% of the sum of all premiums paid, including the premiums paid before any change in benefits. The insurer may offer additional shortened benefit period options, as long as the benefits for each duration equal or exceed the standard nonforfeiture credit for that duration. The minimum nonforfeiture credit shall not be less than 30 times the daily nursing home benefit at the time of lapse. In either event, the calculation of the nonforfeiture credit is subject to the limitation of subsection (F).
 4. When the nonforfeiture benefit begins.
 - a. The nonforfeiture benefit shall begin not later than the end of the third year following the policy or certificate issue date. The contingent benefit upon lapse shall be effective during the first three years, and thereafter.
 - b. Notwithstanding subsection (E)(4)(a), for a policy or certificate with attained age rating, the nonforfeiture benefit shall begin on the earlier of:
 - i. The end of the tenth year following the policy or certificate issue date, or
 - ii. The end of the second year following the date the policy or certificate is no longer subject to attained age rating.
 5. Nonforfeiture credits may be used for all care and services qualifying for benefits under the terms of the policy or certificate, up to the limits specified in the policy or certificate.
- F.** All benefits paid by the insurer while the policy or certificate is in premium-paying status and in the paid-up status shall not exceed the maximum benefits that would be payable if the policy or certificate had remained in premium-paying status.
- G.** There shall be no difference in the minimum nonforfeiture benefits for group and individual policies.
- H.** The requirements in this Section are effective on or after November 10, 2005 and shall apply as follows:
1. Except as provided in subsection (H)(2) and (H)(3), this Section applies to any long-term care policy issued in this state on or after January 10, 2005.
 2. The provisions of this Section do not apply to certificates issued on or after January 10, 2005, under a group long-term care insurance policy as defined in A.R.S. § 20-1691(5)(a), that was in force on January 10, 2005.
 3. The provisions of this Section that apply to fixed or limited premium paying period policies shall only apply to policies issued on or after November 10, 2017.
- I.** Premiums charged for a policy or certificate containing nonforfeiture benefits or a contingent benefit on lapse shall be subject to the loss ratio requirements of R20-6-1013, R20-6-1014 or R20-6-1015, whichever is applicable, treating the policy as a whole.
- J.** To determine whether contingent nonforfeiture upon lapse provisions are triggered under subsection (D)(3) or (D)(4), a replacing insurer that purchased or otherwise assumed a block or blocks of long-term care insurance policies from another insurer shall calculate the percentage increase based on the initial annual premium the insured paid when first buying the policy from the original insurer.
- K.** An insurer shall offer a nonforfeiture benefit for a qualified long-term care insurance contract that is a level premium contract and the benefit shall meet the following requirements:
1. The nonforfeiture provision shall be separately captioned using the term "nonforfeiture benefit" or a substantially similar caption;
 2. The nonforfeiture provision shall provide a benefit available in the event of a default in the payment of any premiums and shall state that the insurer may adjust the amount of the benefit initially granted only as needed to reflect changes in claims, persistency, and interest as reflected in changes in rates for premium paying contracts approved by the Director under to A.R.S. § 20-1691.08 for the same contract form; and
 3. The nonforfeiture provision shall provide at least one of the following:
 - a. Reduced paid-up premiums,
 - b. Extended term insurance,
 - c. Shortened benefit period, or
 - d. Other similar offerings that the Director has approved.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1020. Standards for Benefit Triggers

- A.** A long-term care insurance policy shall condition the payment of benefits on a determination of the insured's ability to perform activities of daily living and on cognitive impairment. Except as otherwise provided in R20-6-1021, eligibility for the payment of benefits shall not be more restrictive than requiring either a deficiency in the ability to perform not more than three of the activities of daily living or the presence of cognitive impairment.
- B.** Activities of daily living shall include at least the following as defined in R20-6-1003(A)(1) and in the policy:
1. Bathing,
 2. Continence,

3. Dressing,
 4. Eating,
 5. Toileting, and
 6. Transferring.
- C. An insurer may use additional activities of daily living to trigger covered benefits if the activities are defined in the policy.
- D. An insurer may use additional provisions to determine when benefits are payable under a policy or certificate; however the provisions shall not restrict, and are not in lieu of, the requirements in subsections (A), (B) and (C).
- E. For purposes of this Section the determination of a deficiency shall not be more restrictive than:
1. Requiring the hands-on assistance of another person to perform the prescribed activities of daily living; or
 2. If the deficiency is due to the presence of a cognitive impairment, requiring supervision or verbal cueing by another person to protect the insured or others.
- F. Licensed or certified professionals, such as physicians, nurses or social workers, shall perform assessments of activities of daily living and cognitive impairment.
- G. The requirements in this Section are effective on and after November 10, 2005 and shall apply as follows:
1. Except as provided in subsection (G)(2), the provisions of this Section apply to a long-term care policy issued in this state on or after January 10, 2005.
 2. The provisions of this Section do not apply to certificates issued on or after January 10, 2005, under a long-term care insurance policy issued to a group as defined in A.R.S. § 20-1691(5)(a), which policy was in force on January 10, 2005.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1021. Additional Standards for Benefit Triggers for Qualified Long-term Care Insurance Contracts

- A. A qualified long-term care insurance contract shall pay only for qualified long-term care services received by a chronically ill individual provided under a plan of care prescribed by a licensed health care practitioner, which is not subject to approval or modification by the insurer.
- B. A qualified long-term care insurance contract shall condition the payment of benefits on a certified determination of the insured's inability to perform activities of daily living for an expected period of at least 90 days due to a loss of functional capacity or to severe cognitive impairment.
- C. Licensed health care practitioners shall perform the certified determinations regarding activities of daily living and cognitive impairment required under subsection (B).
- D. Certified determinations required under subsection (B) may be performed at the direction of the carrier as is reasonably necessary with respect to a specific claim, except that when a licensed health care practitioner has certified that an insured is unable to perform activities of daily living for an expected period of at least 90 days due to a loss of functional capacity and the insured is in claim status, the certified determination may not be rescinded and additional certified determinations may not be performed until after the expiration of the 90-day period.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective

November 10, 2017 (Supp. 17-2).

R20-6-1022. Standard Format Outline of Coverage

- A. The outline of coverage prescribed in A.R.S. § 20-1691.06 shall be a free-standing document, using no smaller than 10 point type, and shall contain no advertising or promotional material.
- B. Text that is capitalized or underscored in the standard format outline of coverage may be emphasized by other means that give prominence equivalent to capitalization or underscoring.
- C. An insurer shall use the text and sequence of text in the standard format outline of coverage prescribed in Appendix J, unless otherwise specifically indicated.

Historical Note

New Section R20-6-1022 renumbered from R20-6-1015 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4).

R20-6-1023. Requirement to Deliver Shopper's Guide

- A. All prospective applicants of a long-term care insurance policy or certificate shall receive a long-term care insurance shopper's guide approved by the Director. This requirement may be satisfied by delivery of the current edition of the long-term care insurance shopper's guide in the format developed by the National Association of Insurance Commissioners.
1. In the case of insurance producer solicitation, an insurance producer shall deliver the shopper's guide before presenting an application or enrollment form.
 2. In the case of direct response solicitations, the insurer shall provide the shopper's guide with any application or enrollment form.
- B. A prospective applicant for a life insurance policy or rider containing accelerated long-term care benefits is not required to receive the guide described in subsection (A), but shall receive the policy summary required under A.R.S. § 20-1691.06.

Historical Note

New Section R20-6-1023 renumbered from R20-6-1016 and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1024. Availability of New Health Care Services or Providers

- A. An insurer shall notify policyholders of the availability of a new long-term policy series that provides coverage for new long-term care services or health care providers material in nature and not previously available through the insurer to the general public. The notice shall be provided within 12 months of the date the new policy series is made available for sale in this state.
- B. Notwithstanding subsection (A), notification is not required for any policy issued prior to the effective date of this Section or to any policyholder or certificateholder who is currently eligible for benefits, within an elimination period or on a claim, or who previously had been in claim status, or who would not be eligible to apply for coverage due to issue age limitations under the new policy. The insurer may require that policyholders meet all eligibility requirements, including underwriting and payment of the required premium to add such new services or providers.
- C. The insurer shall make the new coverage available in one of the following ways:
1. By adding a rider to the existing policy and charging a separate premium for the new rider based on the insured's attained age:

2. By exchanging the existing policy or certificate for one with an issue age based on the present age of the insured and recognizing past insured status by granting premium credits toward the premiums for the new policy or certificate. The premium credits shall be based on premiums paid or reserves held for the prior policy or certificate;
 3. By exchanging the existing policy or certificate for a new policy or certificate in which consideration for past insured status shall be recognized by setting the premium for the new policy or certificate at the issue age of the policy or certificate being exchanged. The cost for the new policy or certificate may recognize the difference in reserves between the new policy or certificate and the original policy or certificate; or
 4. By an alternative program developed by the insurer that meets the intent of this Section if the program is filed with and approved by the Director.
- D.** An insurer is not required to notify policyholders of a new proprietary policy series created and filed for use in a limited distribution channel. For purposes of this subsection, "limited distribution channel" means through a discrete entity, such as a financial institution or brokerage, for which specialized products are available that are not available for sale to the general public. Policyholders who purchased such a new proprietary policy shall be notified when a new long-term care policy series that provides coverage for new long-term care services or providers material in nature is made available to that limited distribution channel.
- E.** Policies issued pursuant to this Section shall be considered exchanges and not replacements. These exchanges shall not be subject to R20-6-1010(A), (C) through (G) and R20-6-1018 and are not subject to the reporting requirements of R20-6-1010(I)(1), (I)(2)(a) through (I)(2)(c).
- F.** Where an employer, labor organization, professional, trade or occupational association offers the policy, the required notification in subsection (A) shall be made to the offering entity. However, if the policy is issued to a group defined in A.R.S. § 20-1691(5), the notification shall be to each certificateholder.
- G.** Nothing in this Section shall prohibit an insurer from offering any policy, rider, certificate or coverage change to any policyholder or certificateholder. However, upon request, any policyholder may apply for currently available coverage that includes the new services or providers. The insurer may require that policyholders meet all eligibility requirements, including underwriting and payment of the required premium, to add such new services or providers.
- H.** This Section does not apply to life insurance policies or riders containing accelerated long-term care benefits.
- I.** This Section shall become effective on or after November 10, 2017.
- holder to reduce coverage and lower the policy or certificate premium in at least one of the following ways:
1. Reducing the maximum benefit; or
 2. Reducing the daily, weekly or monthly benefit amount.
- B.** The insurer may also offer other reduction options that are consistent with the policy or certificate design or the carrier's administrative processes.
- C.** In the event the reduction in coverage involves the reduction or elimination of the inflation protection provision, the insurer shall allow the policyholder to continue the benefit amount in effect at the time of the reduction.
- D.** The provision in subsection (A) shall include a description of the process for requesting and implementing a reduction in coverage.
- E.** The premium for the reduced coverage shall:
1. Be based on the same age and underwriting class used to determine the premium for the coverage currently in force, and
 2. Be consistent with the approved rate table.
- F.** The issuer may limit any reduction in coverage to plans or options available for that policy form and to those for which benefits will be available after consideration of claims paid or payable.
- G.** If a policy or certificate is about to lapse, the insurer shall provide a written reminder to the policyholder or certificateholder of his or her right to reduce coverage and premiums in the notice required by R20-6-1005(F).
- H.** This Section does not apply to life insurance policies or riders containing accelerated long-term benefits.
- I.** The requirements of subsections (A) through (H) shall apply to any long-term care policy issued in this state on or after November 10, 2017.
- J.** A premium increase notice required by R20-6-1008(G) shall include:
1. An offer to reduce policy benefits provided by the current coverage consistent with the requirements of this Section;
 2. A disclosure stating that all options available to the policyholder may not be of equal value; and
 3. In the case of a partnership policy, a disclosure that some benefit reduction options may result in a loss in partnership status that may reduce policyholder protections.
- K.** The requirements of subsection (J) shall apply to any rate increase implemented in this state on or after November 10, 2017.

Historical Note

New Section R20-6-1025 made by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1026. Instructions for Appendices

Information that is designated as a "Drafting Instruction" in a form appended to this Article is not required to be included as part of the form. Any person using the form shall abide by the instructions when drafting, preparing, or completing the form.

Historical Note

New Section R20-6-1026 renumbered from R20-6-1024 by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

Historical Note

New Section made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Section R20-6-1024 renumbered to R20-6-1026; new Section R20-6-1024 made by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

R20-6-1025. Right to Reduce Coverage and Lower Premiums

- A.** Every long-term care insurance policy and certificate shall include a provision that allows the policyholder or certificate-

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Appendix A. Long-term Care Insurance Personal Worksheet

Long-term Care Insurance
Personal Worksheet

People buy long-term care insurance for many reasons. Some don't want to use their own assets to pay for long-term care. Some buy insurance to make sure they can choose the type of care they get. Others don't want their family to have to pay for care or don't want to go on Medicaid. But long-term care insurance may be expensive, and may not be right for everyone.

By state law, the insurance company must fill out part of the information on this worksheet and ask you to fill out the rest to help you and the company decide if you should buy this policy.

Premium Information

Policy Form Numbers _____

The premium for the coverage you are considering will be [\$_____ per month, or \$_____ per year,] [a one-time single premium of \$_____.]

Type of Policy (noncancellable/guaranteed renewable): _____

The Company's Right to Increase Premiums: _____

[The company cannot raise your rates on this policy.] [The company has a right to increase premiums on this policy form in the future, provided it raises rates for all policies in the same class in this state.] [Insurers shall use appropriate bracketed statement. Rate guarantees shall not be shown on this form.]

Rate Increase History

The company has sold long-term care insurance since [year] and has sold this policy since [year]. [The company has never raised its rates for any long-term care policy it has sold in this state or any other state.] [The company has not raised its rates for this policy form or similar policy forms in this state or any other state in the last 10 years.] [The company has raised its premium rates on this policy form or similar policy forms in the last 10 years. Following is a summary of the rate increases.]

(Drafting Instruction: A company may use the first bracketed sentence above only if it has never increased rates under any prior policy forms in this state or any other state. The issuer shall list each premium increase it has instituted on this or similar policy forms in this state or any other state during the last 10 years. The list shall provide the policy form, the calendar years the form was available for sale, and the calendar year and the amount (percentage) of each increase. The insurer shall provide minimum and maximum percentages if the rate increase is variable by rating characteristics. The insurer may provide, in a fair manner, additional explanatory information as appropriate.)

Questions Related to Your Income

How will you pay each year's premium?

From my Income From my Savings/Investments My Family will Pay

[Have you considered whether you could afford to keep this policy if the premiums went up, for example, by 50%?]

(Drafting Instruction: The issuer is not required to use the bracketed sentence if the policy is fully paid up or is a noncancellable policy.)

What is your annual income? (check one) Under \$10,000 \$[10-20,000] \$[20-30,000] \$[30-50,000] Over \$50,000

(Drafting Instruction: The issuer may choose the numbers to put in the brackets to fit its suitability standards.)

How do you expect your income to change over the next 10 years? (check one)

No change Increase Decrease

If you will be paying premiums with money received only from your own income, a rule of thumb is that you may not be able to afford this policy if the premiums will be more than 7% of your income.

Will you buy inflation protection? (check one) Yes No

If not, have you considered how you will pay for the difference between future costs and your daily benefit amount?

From my Income From my Savings/Investments My Family will Pay

The national average annual cost of care in [insert year] was [insert \$ amount], but this figure varies across the country. In ten years the national average annual cost would be about [insert \$ amount] if costs increase 5% annually.

(Drafting Instruction: The projected cost can be based on federal estimates in a current year. In the above statement, the second figure equals 163% of the first figure.)

What elimination period are you considering? Number of days _____ Approximate cost \$ _____ for that period of care.

How are you planning to pay for your care during the elimination period? (check one)

From my Income From my Savings/Investments My Family will Pay

Questions Related to Your Savings and Investments

Not counting your home, about how much are all of your assets (your savings and investments) worth? (check one)

- Under \$20,000 \$20,000-\$30,000 \$30,000-\$50,000 Over \$50,000

How do you expect your assets to change over the next ten years? (check one)

- Stay about the same Increase Decrease

If you are buying this policy to protect your assets and your assets are less than \$30,000, you may wish to consider other options for financing your long-term care.

Disclosure Statement

Form with checkboxes: The answers to the questions above describe my financial situation. or I choose not to complete this information. (Check one.) I acknowledge that the carrier and/or its insurance provider (below) has reviewed this form with me including the premium, premium rate increase history and potential for premium increases in the future. [For direct mail situations, use the following: I acknowledge that I have reviewed this form including the premium, premium rate increase history and potential for premium increases in the future.] I understand the above disclosures. I understand that the rates for this policy may increase in the future. (This box must be checked).

Signed: (Applicant) (Date)

I explained to the applicant the importance of completing this information.

Signed: (Insurance Producer) (Date)

Insurance Producer's Printed Name:

[In order for us to process your application, please return this signed statement to [name of company], along with your application.]

[My insurance provider has advised me that this policy does not seem to be suitable for me. However, I still want the company to consider my application.]

Signed: (Applicant) (Date)

(Drafting Instruction: Choose the appropriate sentences depending on whether this is a direct mail or insurance producer sale.) The company may contact you to verify your answers.

(Drafting Instruction: When the Long-term Care Insurance Personal Worksheet is furnished to employees and their spouses under employer group policies, the text from the heading "Disclosure Statement" to the end of the document may be removed.)

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). Former Appendix A renumbered to Appendix C; new Appendix A made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

Appendix B. Long-term Care Insurance Potential Rate Increase Disclosure Form

Instructions:

This form provides information to the applicant regarding premium rate schedules, rate schedule adjustments, potential rate revisions, and policyholder options in the event of a rate increase.

Insurers shall provide all of the following information to the applicant:

**Long-term Care Insurance
Potential Rate Increase Disclosure Form**

1. **[Premium Rate] [Premium Rate Schedules]:** [Premium rate] [Premium rate schedules] that [is][are] applicable to you and that will be in effect until a request is made and [approved] for an increase [is][are] [on the application][(\$_____)]
2. **The [premium] [premium rate schedule] for this policy [will be shown on the schedule page of] [will be attached to] your policy.**

3. **Rate Schedule Adjustments:**

The company will provide a description of when premium rate or rate schedule adjustments will be effective (e.g., next anniversary date, next billing date, etc.) (fill in the blank): _____.

4. **Potential Rate Revisions:**

This policy is Guaranteed Renewable. This means that the rates for this product may be increased in the future. Your rates can NOT be increased due to your increasing age or declining health, but your rates may go up based on the experience of all policyholders with a policy similar to yours.

If you receive a premium rate or premium rate schedule increase in the future, you will be notified of the new premium amount and you will be able to exercise at least one of the following options:

- Pay the increased premium and continue your policy in force as is.
- Reduce your policy benefits to a level such that your premiums will not increase. (Subject to state law minimum standards.)
- Exercise your nonforfeiture option if purchased. (This option is available for purchase for an additional premium.)
- Exercise your contingent nonforfeiture rights.* (This option may be available if you do not purchase a separate nonforfeiture option.)

***Contingent Nonforfeiture**

If the premium rate for your policy goes up in the future and you didn't buy a nonforfeiture option, you may be eligible for contingent nonforfeiture. Here's how to tell if you are eligible:

You will keep some long-term care insurance coverage, if:

- Your premium after the increase exceeds your original premium by the percentage shown (or more) in the following table; and
- You lapse (not pay more premiums) within 120 days of the increase.

The amount of coverage (i.e., new lifetime maximum benefit amount) you will keep will equal the total amount of premiums you have paid since your policy was first issued. If you have already received benefits under the policy, so that the remaining maximum benefit amount is less than the total amount of premiums you've paid, the amount of coverage will be that remaining amount.

Except for this reduced lifetime maximum benefit amount, all other policy benefits will remain at the levels attained at the time of the lapse and will not increase thereafter.

Should you choose this Contingent Nonforfeiture option, your policy, with this reduced maximum benefit amount, will be considered "paid-up" with no further premiums due.

Example:

- You bought the policy at age 65 and paid the \$1,000 annual premium for 10 years, so you have paid a total of \$10,000 in premium.
- In the eleventh year, you receive a rate increase of 50%, or \$500 for a new annual premium of \$1,500, and you decide to lapse the policy (not pay any more premiums).
- Your "paid-up" policy benefits are \$10,000 (provided you have a least \$10,000 of benefits remaining under your policy.)

Contingent Nonforfeiture Cumulative Premium Increase over Initial Premium That qualifies for Contingent Nonforfeiture	
(Percentage increase is cumulative from date of original issue. It does NOT represent a one-time increase.)	
Issue Age	Percent Increase Over Initial Premium
29 and under	200%
30-34	190%
35-39	170%
40-44	150%
45-49	130%
50-54	110%
55-59	90%
60	70%
61	66%
62	62%

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63	58%
64	54%
65	50%
66	48%
67	46%
68	44%
69	42%
70	40%
71	38%
72	36%
73	34%
74	32%
75	30%
76	28%
77	26%
78	24%
79	22%
80	20%
81	19%
82	18%
83	17%
84	16%
85	15%
86	14%
87	13%
88	12%
89	11%
90 and over	10%

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). Former Appendix B renumbered to Appendix D; new Appendix B made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

Appendix C. Notice to Applicant Regarding Replacement of Individual Health or Long-term Care Insurance**NOTICE TO APPLICANT REGARDING REPLACEMENT OF INDIVIDUAL HEALTH OR LONG-TERM CARE INSURANCE****[Insurance company's name and address]****SAVE THIS NOTICE! IT MAY BE IMPORTANT TO YOU IN THE FUTURE.**

According to [your application] [information you have furnished], you intend to lapse or otherwise terminate existing health or long-term care insurance and replace it with an individual long-term care insurance policy to be issued by [company name] Insurance Company. Your new policy provides thirty (30) days within which you may decide, without cost, whether you desire to keep the policy. For your own information and protection, you should be aware of and seriously consider certain factors which may affect the insurance protection available to you under the new policy.

You should review this new coverage carefully, comparing it with all health or long-term care insurance coverage you now have, and terminate your present policy only if, after due consideration, you find that purchase of this long-term care coverage is a wise decision.

STATEMENT TO APPLICANT BY [INSURANCE PRODUCER OR OTHER REPRESENTATIVE]:

Use additional sheets, as necessary.)

I have reviewed your current medical or health insurance coverage. I believe the replacement of insurance involved in this transaction materially improves your position. My conclusion has taken into account the following considerations which I call to your attention:

1. Health conditions that you may presently have (preexisting conditions), may not be immediately or fully covered under your new policy. This could result in denial or delay in payment of benefits under the new policy, whereas a similar claim might have been payable under your present policy.
2. State law provides that your replacement policy or certificate may not contain new preexisting conditions or probationary periods. The insurer will waive any time periods applicable to preexisting conditions or probationary periods in the new policy (or coverage) for similar benefits to the extent such time was spent (depleted) under the original policy.
3. If you are replacing existing long-term care insurance coverage, you may wish to secure the advice of your present insurer or its agent regarding the proposed replacement of your present policy. This is not only your right, but it is also in your best interest to make sure you understand all of the relevant factors involved in replacing your present coverage.
4. If, after due consideration, you still wish to terminate your present policy and replace it with new coverage, be certain to truthfully and completely answer all questions on the application concerning your medical health history. Failure to include all material medical information on an application may provide a basis for the company to deny any future claims and to refund your premium as though your policy had never been in force. After the application has been completed and before you sign it, reread it carefully to be certain that all information has been properly recorded.

(Signature of Insurance Producer or Other Representative)

(Typed Name and Address of Insurance Producer)

The above "Notice to Applicant" was delivered to me on:

(Date)

(Applicant's Signature)

Historical Note

Adopted effective August 10, 1992 (Supp. 92-3). New Appendix C renumbered from Appendix A and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

Appendix D. Notice to Applicant Regarding Replacement of Health or Long-term Care Insurance**NOTICE TO APPLICANT REGARDING REPLACEMENT OF HEALTH OR LONG-TERM CARE INSURANCE****[Insurance company's name and address]****SAVE THIS NOTICE! IT MAY BE IMPORTANT TO YOU IN THE FUTURE**

According to [your application] [information you have furnished], you intend to lapse or otherwise terminate existing health or long-term care insurance and replace it with the long-term care insurance policy being delivered and issued by [company name] Insurance Company. Your new policy gives you thirty (30) days to decide, without cost, whether you want to keep the policy. For your own information and protection, you should be aware of and seriously consider certain factors which may affect the insurance protection available to you under the new policy.

You should review this new coverage carefully, comparing it with all health or long-term care insurance coverage you now have, and terminate your present policy only if, after due consideration, you find that purchase of this long-term care coverage is a wise decision.

1. Health conditions which you may presently have (preexisting conditions), may not be immediately or fully covered under the new policy. This could result in denial or delay in payment of benefits under the new policy, even though a similar claim might have been payable under your present policy.
2. State law provides that your replacement policy or certificate may not contain new preexisting conditions or probationary periods. The insurer will waive any time periods applicable to preexisting conditions or probationary periods in the new policy (or coverage) for similar benefits to the extent such time was spent (depleted) under the original policy.
3. If you are replacing existing long-term care insurance coverage, you may wish to secure the advice of your present insurer or its insurance producer regarding the proposed replacement of your present policy. This is not only your right, but it is also in your best interest to make sure you understand all the relevant factors involved in replacing your present coverage.
4. [To be included only if the application is attached to the policy.] If, after due consideration, you still wish to terminate your present policy and replace it with new coverage, read the copy of the application attached to your new policy and be sure that all questions are answered fully and correctly. Omissions or misstatements in the application could cause an otherwise valid claim to be denied. Carefully check the application and write to [company name and address] within thirty (30) days if any information is not correct and complete, or if any past medical history has been left out of the application.

Historical Note

New Appendix D renumbered from Appendix B and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

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Appendix E. Long-Term Care Insurance Replacement and Lapse Reporting Form

Long-term Care Insurance Replacement and Lapse Reporting Form

For the State of _____
 For the Reporting Year of _____

Company Name: _____ Due: June 30 annually
 Company Address: _____ Company NAIC Number: _____
 Contact Person: _____ Phone Number: (____) _____

Instructions

The purpose of this form is to report on a statewide basis information regarding long-term care insurance policy replacements and lapses. Every insurer shall maintain the following records for each insurance producer: (1) the amount of long-term care insurance replacement sales as a percent of the insurance producer's total annual sales and (2) the amount of lapses of long-term care insurance policies sold by the insurance producer as a percent of the insurance producer's total annual sales. The tables below should be used to report the 10% of the insurer's insurance producers with the greatest percentages of replacements and lapses.

Listing of the 10% of Insurance Producers with the Greatest Percentage of Replacements

Insurance Producer's Name	Number of Policies Sold By This Insurance Producer	Number of Policies Replaced By This Insurance Producer	Number of Replacements as % of Number of Policies Sold By This Insurance Producer

Listing of the 10% of Insurance Producers with the Greatest Percentage of Lapses

Insurance Producer's Name	Number of Policies Sold By This Insurance Producer	Number of Policies Lapsed By This Insurance Producer	Number of Lapses As % of Number Sold By This Insurance Producer

Company Totals

Percentage of Replacement Policies Sold to Total Annual Sales ____%
 Percentage of Replacement Policies Sold to Policies In Force (as of the end of the preceding calendar year) ____%
 Percentage of Lapsed Policies to Total Annual Sales ____%
 Percentage of Lapsed Policies to Policies In Force (as of the end of the preceding calendar year) ____%

Historical Note

New Appendix E made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

Appendix F. Long-term Care Insurance Claims Denial Reporting Form

Long-term Care Insurance
Claims Denial Reporting Form

For the State of _____
For the Reporting Year of _____

Company Name: _____ Due: June 30 annually
Company Address: _____

Company NAIC Number: _____
Contact Person: _____ Phone Number: _____
Line of Business: Individual Group

Instructions

The purpose of this form is to report all long-term care claim denials under in-force long-term care insurance policies. Indicate the manner of reporting by checking one of the boxes below:

- Per Claimant - counts each individual who makes one or a series of claim requests
- Per Transaction - counts each claim payment request

“Denied” means a claim that is not paid for any reason other than for claims not paid for failure to meet the waiting period or because of an applicable preexisting condition. It does not include a request for payment that is in excess of the applicable contractual limits.

Inforce Data

	State Data	Nationwide Data ¹
Total Number of Inforce Policies [Certificates] as of December 31st		

Claims & Denial Data

	State Data	Nationwide Data ¹
1 Total Number of Long-Term Care Claims Reported		
2 Total Number of Long-Term Care Claims Denied/Not Paid		
3 Number of Claims Not Paid due to Preexisting Condition Exclusion		
4 Number of Claims Not Paid due to Waiting (Elimination) Period Not Met		
5 Net Number of Long-Term Care Claims Denied for Reporting Purposes (Line 2 Minus Line 3 Minus Line 4)		
6 Percentage of Long-Term Care Claims Denied of Those Reported (Line 5 Divided By Line 1)		
7 Number of Long-Term Care Claim Denied due to:		
8 • Long-Term Care Services Not Covered under the Policy ²		
9 • Provider/Facility Not Qualified under the Policy ³		
10 • Benefit Eligibility Criteria Not Met ⁴		
11 • Other		

1. The nationwide data may be viewed as a more representative and credible indicator where the data for claims reported and denied for your state are small in number.
2. Example—home health care claim filed under a nursing home only policy.
3. Example—a facility that does not meet the minimum level of care requirements or the licensing requirements as outlined in the policy.
4. Examples—a benefit trigger not met, certification by a licensed health care practitioner not provided, no plan of care.

Historical Note

New Appendix F made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

Appendix G. Rescission Reporting Form for Long-term Policies

RESCISSION REPORTING FORM FOR LONG-TERM CARE POLICIES

FOR THE STATE OF _____ FOR THE REPORTING YEAR _____

Company Name _____ Address: _____

Phone Number: _____ Due: March 1 annually

Instructions:

The purpose of this form is to report all rescissions of long-term care insurance policies or certificates. Those rescissions voluntarily effectuated by an insured are not required to be included in this report. Please furnish one form per rescission.

Table with 6 columns: Policy Form #, Policy and Certificate #, Name of Insured, Date of Policy Issuance, Date/s Claim/s Submitted, Date of Rescission

Detailed reason for rescission:

Horizontal lines for providing detailed reason for rescission

Signature

Name and Title (please type)

Date

Historical Note

New Appendix G made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4).

Appendix H. Things You Should Know Before You Buy Long-term Care Insurance

Things You Should Know Before You Buy
Long-term Care Insurance**Long-Term
Care
Insurance**

- A long-term care insurance policy may pay most of the costs for your care in a nursing home. Many policies also pay for care at home or other community settings. Since policies can vary in coverage, you should read this policy and make sure you understand what it covers before you buy it.

- **[WARNING! You should *not* buy this insurance policy unless you can afford to pay the premiums every year. You are making a multi-year financial commitment.]** [Remember that the company can increase premiums in the future.]

(Drafting Instruction: For single premium policies, delete this bullet; for noncancellable policies, delete the second sentence only.)

- The personal worksheet includes questions designed to help you and the company determine whether this policy is suitable for your needs.

Medicare

- Medicare does **not** pay for most long-term care.

Medicaid

- Medicaid will generally pay for long-term care if you have very little income and few assets. You probably should not buy this policy if you are now eligible for Medicaid.

- Many people become eligible for Medicaid after they have used up their own financial resources by paying for long-term care services.

- When Medicaid pays your spouse's nursing home bills, you are allowed to keep your house and furniture, a living allowance, and some of your joint assets.

- Your choice of long-term care services may be limited if you are receiving Medicaid. To learn more about Medicaid, contact your local or state Medicaid agency.

**Shopper's
Guide**

- Make sure the insurance company or agent gives you a copy of a book called the National Association of Insurance Commissioners' "Shopper's Guide to Long-Term Care Insurance." Read it carefully. If you have decided to apply for long-term care insurance, you have the right to return the policy within 30 days and get back any premium you have paid if you are dissatisfied for any reason or choose not to purchase the policy.

Counseling

- Free counseling and additional information about long-term care insurance are available through your state's insurance counseling program. Contact your state insurance department or department on aging for more information about the senior health insurance counseling program in your state.

Facilities

- Some long-term care insurance contracts provide for benefit payments in certain facilities only if they are licensed or certified, such as in assisted living centers. However, not all states regulate these facilities in the same way. Also, many people move into a different state from where they purchased their long-term care insurance policy. Read the policy carefully to determine what types of facilities qualify for benefit payments, and to determine that payment for a covered service will be made if you move to a state that has a different licensing scheme for facilities than the one in which you purchased the policy.

Historical Note

New Appendix H made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

Appendix I. Long-term Care Insurance Suitability Letter**Long-term Care Insurance Suitability Letter**

Dear [Applicant]:

Your recent application for long-term care insurance included a “personal worksheet,” which asked questions about your finances and your reasons for buying long-term care insurance. For your protection, state law requires us to consider this information when we review your application, to avoid selling a policy to those who may not need coverage.

[Your answers indicate that long-term care insurance may not meet your financial needs. We suggest that you review the information provided along with your application, including the booklet “Shopper’s Guide to Long-Term Care Insurance” and the page titled “Things You Should Know Before Buying Long-Term Care Insurance.” Your state insurance department also has information about long-term care insurance and may be able to refer you to a counselor free of charge who can help you decide whether to buy this policy.]

[You chose not to provide any financial information for us to review.]

(Drafting Instruction: Choose the paragraph that applies.)

We have suspended our final review of your application. If, after careful consideration, you still believe this policy is what you want, check the appropriate box below and return this letter to us within the next 60 days. We will then continue reviewing your application and issue a policy if you meet our medical standards.

If we do not hear from you within the next 60 days, we will close your file and not issue you a policy. You should understand that you will not have any coverage until we hear back from you, approve your application and issue you a policy.

Please check one box and return in the enclosed envelope.

- Yes**, [although my worksheet indicates that long-term care insurance may not be a suitable purchase.] I wish to purchase this coverage. Please resume review of my application.

Drafting Instruction: Delete the phrase in brackets if the applicant did not answer the questions about income.

- No**. I have decided not to buy a policy at this time.

APPLICANT’S SIGNATURE

DATE

Please return to [issuer] at [address] by [date].

Historical Note

New Appendix I made by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

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Appendix J. Long-term Care Insurance Outline of Coverage

[COMPANY NAME]
 [ADDRESS - CITY & STATE]
 [TELEPHONE NUMBER]
 LONG-TERM CARE INSURANCE

OUTLINE OF COVERAGE
 [Policy Number or Group Master Policy and Certificate Number]

[Except for policies or certificates which are guaranteed issue, the following caution statement, or language substantially similar, shall appear as follows in the outline of coverage.]

Caution: The issuance of this long-term care insurance [policy] [certificate] is based upon your responses to the questions on your application. A copy of your [application] [enrollment form] [is enclosed] [was retained by you when you applied]. If your answers are incorrect or untrue, the company has the right to deny benefits or rescind your policy. The best time to clear up any questions is now, before a claim arises! If, for any reason, any of your answers are incorrect, contact the company at this address: [insert address]

1. This policy is [an individual policy of insurance] [a group policy] which was issued in the [indicate jurisdiction in which group policy was issued].
2. PURPOSE OF OUTLINE OF COVERAGE. This outline of coverage provides a very brief description of the important features of the policy. You should compare this outline of coverage to outlines of coverage for other policies available to you. This is not an insurance contract, but only a summary of coverage. Only the individual or group policy contains governing contractual provisions. This means that the policy or group policy sets forth in detail the rights and obligations of both you and the insurance company. Therefore, if you purchase this coverage, or any other coverage, it is important that you READ YOUR POLICY (OR CERTIFICATE) CAREFULLY!
3. FEDERAL TAX CONSEQUENCES
 This [POLICY] [CERTIFICATE] is intended to be a federally tax-qualified long-term care insurance contract under Section 7702(B)(b) of the Internal Revenue Code of 1986, as amended.

OR

Federal Tax Implications of this [POLICY] [CERTIFICATE]. This [POLICY] [CERTIFICATE] is not intended to be a federally tax-qualified long-term care insurance contract under Section 7702(B)(b) of the Internal Revenue Code of 1986, as amended. Benefits received under the [POLICY] [CERTIFICATE] may be taxable as income.

4. TERMS UNDER WHICH THE POLICY OR CERTIFICATE MAY BE CONTINUED IN FORCE OR DISCONTINUED
 - (a) [For long-term care health insurance policies or certificates describe one of the following permissible policy renewability provisions:
 - (1) Policies and certificates that are guaranteed renewable shall contain the following statement:] RENEWABILITY: THIS POLICY [CERTIFICATE] IS GUARANTEED RENEWABLE. This means you have the right, subject to the terms of your policy, [certificate] to continue this policy as long as you pay your premiums on time. [Company Name] cannot change any of the terms of your policy on its own, except that, in the future, IT MAY INCREASE THE PREMIUM YOU PAY.
 - (2) [Policies and certificates that are noncancellable shall contain the following statement:] RENEWABILITY: THIS POLICY [CERTIFICATE] IS NONCANCELLABLE. This means that you have the right, subject to the terms of your policy, to continue this policy as long as you pay your premiums on time. [Company Name] cannot change any of the terms of your policy on its own and cannot change the premium you currently pay. However, if your policy contains an inflation protection feature where you choose to increase your benefits, [Company Name] may increase your premium at that time for those additional benefits.
 - (b) [For group coverage, specifically describe continuation/conversion provisions applicable to the certificate and group policy;]
 - (c) [Describe waiver of premium provisions or state that there are not such provisions;]
5. TERMS UNDER WHICH THE COMPANY MAY CHANGE PREMIUMS.
 [In bold type larger than the maximum type required to be used for the other provisions of the outline of coverage, state whether or not the company has a right to change the premium, and if a right exists, describe clearly and concisely each circumstance under which the premium may change.]
6. TERMS UNDER WHICH THE POLICY OR CERTIFICATE MAY BE RETURNED AND PREMIUM REFUNDED.
 - (a) [Provide a brief description of the right to return - "free look" provision of the policy.]
 - (b) [Include a statement that the policy either does or does not contain provisions providing for a refund or partial refund of premium upon the death of an insured or surrender of the policy or certificate. If the policy contains such provisions, include a description of them.]
7. THIS IS NOT MEDICARE SUPPLEMENT COVERAGE. If you are eligible for Medicare, review the Medicare Supplement Buyer's Guide available from the insurance company.
 - (a) [For insurance producers] Neither [insert company name] nor its [agents or insurance producers] represent Medicare, the federal government or any state government.
 - (b) [For direct response] [insert company name] is not representing Medicare, the federal government or any state government.
8. LONG-TERM CARE COVERAGE. Policies of this category are designed to provide coverage for one or more necessary or medically necessary diagnostic, preventive, therapeutic, rehabilitative, maintenance, or personal care services, provided in a setting other than an acute-care unit of a hospital, such as in a nursing home, in the community or in the home.
 This policy provides coverage in the form of a fixed dollar indemnity benefit for covered long-term care expenses, subject to policy [limitations] [waiting periods] and [coinsurance] requirements. [Modify this paragraph if the policy is not an indemnity policy.]
9. BENEFITS PROVIDED BY THIS POLICY.
 - (a) [Covered services, related deductible(s), waiting periods, elimination periods and benefit maximums.]
 - (b) [Institutional benefits, by skill level.]
 - (c) [Non-institutional benefits, by skill level.]
 - (d) Eligibility for Payment of Benefits
 [Activities of daily living and cognitive impairment shall be used to measure an insured's need for long-term care and shall be defined

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and described as part of the outline of coverage.]

[Any additional benefit triggers shall be explained in this Section. If these triggers differ for different benefits, explanation of the triggers shall accompany each benefit description. If an attending physician or other specified person must certify a certain level of functional dependency in order to be eligible for benefits, this too must be specified.]

10. LIMITATIONS AND EXCLUSIONS.

[Describe:

- (a) Preexisting conditions;
- (b) Non-eligible facilities and providers;
- (c) Non-eligible levels of care (e.g., unlicensed providers, care or treatment provided by a family member, etc.);
- (d) Exclusions and exceptions;
- (e) Limitations.]

[This Section shall provide a brief specific description of any policy provisions which limit, exclude, restrict, reduce, delay, or in any other manner operate to qualify payment of the benefits described in paragraph 6 above.]

THIS POLICY MAY NOT COVER ALL THE EXPENSES ASSOCIATED WITH YOUR LONG-TERM CARE NEEDS.

11. RELATIONSHIP OF COST OF CARE AND BENEFITS. Because the costs of long-term care services will likely increase over time, you should consider whether and how the benefits of this plan may be adjusted. [As applicable, indicate the following:

- (a) That the benefit level will not increase over time;
- (b) Any automatic benefit adjustment provisions;
- (c) Whether the insured will be guaranteed the option to buy additional benefits and the basis upon which benefits will be increased over time if not by a specified amount or percentage;
- (d) If there is such a guarantee, include whether additional underwriting or health screening will be required, the frequency and amounts of the upgrade options, and any significant restrictions or limitations;
- (e) Describe whether there will be any additional premium charge imposed, and how that is to be calculated.]

12. ALZHEIMER'S DISEASE AND OTHER ORGANIC BRAIN DISORDERS.

[State that the policy provides coverage for insureds clinically diagnosed as having Alzheimer's disease or related degenerative and dementing illnesses. Specifically describe each benefit screen or other policy provision which provides preconditions to the availability of policy benefits for such an insured.]

13. PREMIUM.

- (a) State the total annual premium for the policy;
- (b) If the premium varies with an applicant's choice among benefit options, indicate the portion of annual premium which corresponds to each benefit option.]

14. ADDITIONAL FEATURES.

- (a) Indicate if medical underwriting is used;
- (b) Describe other important features.]

15. CONTACT THE STATE SENIOR HEALTH INSURANCE ASSISTANCE PROGRAM IF YOU HAVE GENERAL QUESTIONS REGARDING LONG-TERM CARE INSURANCE. CONTACT THE INSURANCE COMPANY IF YOU HAVE SPECIFIC QUESTIONS REGARDING YOUR LONG-TERM CARE INSURANCE POLICY OR CERTIFICATE.

Historical Note

New Appendix J renumbered from Appendix C and amended by final rulemaking at 10 A.A.R. 4661, effective January 3, 2005 (Supp. 04-4). Amended by final exempt rulemaking at 23 A.A.R. 1119, effective November 10, 2017 (Supp. 17-2).

ARTICLE 11. MEDICARE SUPPLEMENT INSURANCE**R20-6-1101. Incorporation by Reference and Modifications**

A. The Department incorporates by reference the Model Regulation to Implement the National Association of Insurance Commissioners (NAIC) Medicare Supplement Insurance Minimum Standards Model Act, October 2008 (Model Regulation), and no future editions or amendments, which is on file with the Department of Insurance, 2910 N. 44th St., Phoenix, AZ 85018 and available from the National Association of Insurance Commissioners, Publications Department, 2301 McGee St., Suite 800, Kansas City, MO 64108.

B. The Model Regulation is modified as follows:

1. In addition to the terms defined in the Model Regulation, the following definitions apply:
 - a. "Agent" means an insurance producer as defined in A.R.S. § 20-281(5).
 - b. "Commissioner" means the Director of the Arizona Department of Insurance.
 - c. "HMO" and "health maintenance organization" mean a health care services organization as defined in A.R.S. § 20-1051(7).
 - d. "Regulation" means Article.
2. Section 8A(7)(c) reads:
 - c. Each Medicare supplement policy shall provide that benefits and premiums under the policy shall be suspended (for any period that may be provided by federal regulation) at the request of the policyholder if the policyholder is entitled to benefits under Section

226(b) of the Social Security Act and is covered under a group health plan (as defined in Section 1862(b)(1)(A)(v) of the Social Security Act). If suspension occurs and if the policyholder or certificate holder loses coverage under the group health plan, the policy shall be automatically reinstated (effective as of the date of loss of coverage) if the policyholder provides notice of loss of coverage within 90 days after the date of the loss of the group health plan and pays the premium attributable to the supplemental policy period, effective as of the date of termination of enrollment in the group health plan.

3. Section 8.1 is revised to insert the citation to A.R.S. § 20-1133 as follows:

The following standards are applicable to all Medicare supplement policies or certificates delivered or issued for delivery in this state on or after June 1, 2010. No policy or certificate may be advertised, solicited, delivered, or issued for delivery in this state as a Medicare supplement policy or certificate unless it complies with these benefit standards. No issuer may offer any [1990 Standardized Medicare supplement benefit plan] for sale on or after June 1, 2010. Benefit standards applicable to Medicare supplement policies and certificates issued before June 1, 2010 remain subject to the requirements of A.R.S. § 20-1133.
4. Section 8.1(A)(7)(c) is revised to read as follows:

Each Medicare supplement policy shall provide that benefits and premiums under the policy shall be suspended

(for any period that may be provided by federal regulation) at the request of the policyholder if the policyholder is entitled to benefits under Section 226(b) of the Social Security Act and is covered under a group health plan (as defined in Section 186(b)(1)(A)(v) of the Social Security Act). If suspension occurs and if the policyholder or certificate holder loses coverage under the group health plan, the policy shall be automatically reinstated (effective as of the date of loss of coverage) if the policyholder provides notice of loss of coverage within 90 days after the date of the loss and pays the premium attributable to the period, effective as of the date of termination of enrollment in the group health plan.

5. Section 9.1 is revised to insert the citation to A.R.S. § 20-1133 as follows:

The following standards are applicable to all Medicare supplement policies or certificates delivered or issued for delivery in this state on or after June 1, 2010. No policy or certificate may be advertised, solicited, delivered or issued for delivery in this state as a Medicare supplement policy or certificate unless it complies with these benefit plan standards. Benefit plan standards applicable to Medicare supplement policies and certificates issued before June 1, 2010 remain subject to the requirements of A.R.S. § 20-1133.

6. Subsection G of Section 15 is revised as follows:

G. An insurer shall not file or request approval of a rate structure for its Medicare supplement policies or certificates based upon attained-age rating as a structure or methodology.

7. Tables for PLAN F or HIGH DEDUCTIBLE PLAN F are revised as follows:

- a. For the table entitled "PARTS A & B" a column heading is revised from "AFTER YOU PAY \$[2000] DEDUCTIBLE,** PLAN PAYS" to "[AFTER YOU PAY \$[2000] DEDUCTIBLE,**] PLAN PAYS."
- b. For the table entitled "PARTS A & B" a column heading is revised from "IN ADDITION TO \$[2000] DEDUCTIBLE,** YOU PAY" to ["IN ADDITION TO \$[2000] DEDUCTIBLE,**] YOU PAY."
- c. For the table entitled "OTHER BENEFITS - NOT COVERED BY MEDICARE" a column heading is revised from "AFTER YOU PAY \$[2000] DEDUCTIBLE,** PLAN PAYS" to "[AFTER YOU PAY \$[2000] DEDUCTIBLE,**] PLAN PAYS."
- d. For the table entitled "OTHER BENEFITS - NOT COVERED BY MEDICARE" a column heading is revised from "IN ADDITION TO \$[2000] DEDUCTIBLE,** YOU PAY" to ["IN ADDITION TO \$[2000] DEDUCTIBLE,**] YOU PAY."

8. Section 23 is revised as follows:

- A. If a Medicare supplement policy or certificate replaces another Medicare supplement policy or certificate, the replacing issuer shall waive any time periods applicable to preexisting conditions, waiting periods, elimination periods and probationary periods in the new Medicare supplement policy or certificate to the extent such time was spent under the original policy.
- B. If a Medicare supplement policy or certificate replaces another Medicare supplement policy or certificate which has been in effect for at least six months, the replacing policy shall not provide any time period applicable to preexisting conditions,

waiting periods, elimination periods and probationary periods.

Historical Note

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1101 recodified from R4-14-1101 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Section repealed; new Section made by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3). Amended by final rulemaking at 15 A.A.R. 996, effective June 2, 2009 (Supp. 09-2).

R20-6-1102. Repealed

Historical Note

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted with changes effective May 28, 1992 (Supp. 92-2). R20-6-1102 recodified from R4-14-1102 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Amended by final rulemaking at 5 A.A.R. 618, effective February 4, 1999 (Supp. 99-1). Amended by final rulemaking at 5 A.A.R. 910, effective March 3, 1999 (Supp. 99-1). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1102.01 Repealed

Historical Note

New Section adopted by final rulemaking at 5 A.A.R. 618, effective February 4, 1999 (Supp. 99-1). Amended by final rulemaking at 5 A.A.R. 910, effective March 3, 1999 (Supp. 99-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1103. Repealed

Historical Note

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1103 recodified from R4-14-1103 (Supp. 95-1). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1104. Repealed

Historical Note

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1104 recodified from R4-14-

1104 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1105. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1105 recodified from R4-14-1105 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Amended effective June 15, 1998 (Supp. 98-2). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1106. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1106 recodified from R4-14-1106 (Supp. 95-1). Amended effective June 15, 1998 (Supp. 98-2). Amended by final rulemaking at 5 A.A.R. 910 effective March 3, 1999 (Supp. 99-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1107. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted with changes effective May 28, 1992 (Supp. 92-2). R20-6-1107 recodified from R4-14-1107 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1108. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1108 recodified from R4-14-1108 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Amended by final rulemaking at 5 A.A.R. 910 effective March 3, 1999 (Supp. 99-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1109. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective

March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1109 recodified from R4-14-1109 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1110. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1110 recodified from R4-14-1110 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Amended effective June 15, 1998 (Supp. 98-2). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1111. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1111 recodified from R4-14-1111 (Supp. 95-1). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1112. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1112 recodified from R4-14-1112 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1113. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1113 recodified from R4-14-1113 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Amended effective June 15, 1998 (Supp. 98-2). Amended by final rulemaking at 5 A.A.R. 910 effective March 3, 1999 (Supp. 99-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1114. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective

March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1114 recodified from R4-14-1114 (Supp. 95-1). Amended effective August 16, 1996 (Supp. 96-3). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1115. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1115 recodified from R4-14-1115 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1116. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1116 recodified from R4-14-1116 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1117. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1117 recodified from R4-14-1117 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1118. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1118 recodified from R4-14-1118 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1119. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1119 recodified from R4-14-1119 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

05-3).

R20-6-1120. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). R20-6-1120 recodified from R4-14-1120 (Supp. 95-1). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

R20-6-1121. Repealed**Historical Note**

New Section adopted by final rulemaking at 5 A.A.R. 910, effective March 3, 1999 (Supp. 99-1). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Section repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

Appendix A. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again and correction made to heading of form on last page of Appendix A effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). Appendix A repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

Appendix B. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again and corrections made to Plan C (Medicare (Part B) - Medical Services - Per Calendar Year) and Plan J (Other Benefits) effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). Amended effective August 16, 1996 (Supp. 96-3). Amended effective June 15, 1998 (Supp. 98-2). Amended by final rulemaking at 5 A.A.R. 910, effective March 3, 1999 (Supp. 99-1). Amended by final rulemaking at 8 A.A.R. 2454, effective May 13, 2002 (Supp. 02-2). Appendix B repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

Appendix C. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). Amended effective August 16, 1996 (Supp. 96-3). Appendix C repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

Appendix D. Repealed

Historical Note

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). Amended effective August 16, 1996 (Supp. 96-3). Appendix D repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

Appendix E. Repealed**Historical Note**

Emergency rule adopted effective December 18, 1991, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 91-4). Emergency rule adopted again effective March 17, 1992, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 92-1). Adopted effective May 28, 1992 (Supp. 92-2). Appendix E repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

Appendix F. Repealed**Historical Note**

Appendix F adopted effective August 16, 1996 (Supp. 96-3). Amended effective June 15, 1998 (Supp. 98-2). Amended by final rulemaking at 5 A.A.R. 910, effective March 3, 1999 (Supp. 99-1). Appendix F repealed by final rulemaking at 11 A.A.R. 3671, effective November 12, 2005 (Supp. 05-3).

ARTICLE 12. HIV/AIDS: PROHIBITED AND REQUIRED PRACTICES**R20-6-1201. Definitions**

- A. "AIDS" means Acquired Immune Deficiency Syndrome.
- B. "Applicant" means an applicant for a life or disability insurance policy or coverage under a health care plan, as well as any potential certificate holder or dependent covered under such policy or plan.
- C. "Insurer" means life and disability insurers (including but not limited to health insurers), hospital and medical service corporations, and health care services organizations, including all employees, contractors, and agents thereof.
- D. "Person" means any individual, company, insurer, association, organization, society, reciprocal or inter-insurance exchange, partnership, syndicate, business trust, corporation, or entity.

Historical Note

Adopted effective March 7, 1994 (Supp. 94-1). R20-6-1201 recodified from R4-14-1201 (Supp. 95-1).

R20-6-1202. Applications for Insurance

- A. Insurers shall not use questions on applications for life or disability policies or health care plans that inquire directly or indirectly about:
 - 1. The sexual orientation of an applicant;
 - 2. An applicant's receipt of transfusions of blood or blood products; or
 - 3. Whether or not the applicant has had any HIV-related test, except as provided in subsection (B) of this rule.
- B. Insurers may include specific questions on applications for life or disability insurance policies or health care plans asking if the applicant has ever been diagnosed or treated for AIDS or AIDS-related conditions or tested positive for the presence of HIV antibodies, antigens, or the virus. No adverse underwriting decision shall be made on the basis of any prior positive HIV-related test or tests unless the insurer has verified that the prior test(s) consisted of both a positive screening test such as

enzyme-linked immunoassay (ELISA) and a positive supplemental test such as a Western Blot. All such tests used shall be approved and licensed by the Food and Drug Administration and conducted in accordance with the manufacturer's directions for use, including but not limited to the manufacturers' specified interpretation of positivity.

Historical Note

Adopted effective March 7, 1994 (Supp. 94-1). R20-6-1202 recodified from R4-14-1202 (Supp. 95-1).

R20-6-1203. Testing for HIV; Consent Form

- A. An insurer may test for HIV infection in the same way that the insurer tests for other conditions that affect mortality and morbidity. No adverse underwriting decision shall be made on the basis of a positive result to an HIV-related test unless the result consists of both a positive screening test such as enzyme-linked immunoassay (ELISA) and a positive supplemental test such as a Western Blot. All such tests used shall be approved and licensed by the Food and Drug Administration and conducted in accordance with the manufacturers' directions for use, including but not limited to the manufacturers' specified interpretation of positivity.
- B. If an applicant is requested to take an HIV-related test in connection with an application for a life or disability insurance policy or a health care plan, the insurer shall reveal the use of such test to the applicant and shall obtain the written consent of the applicant prior to the administration of such test. The insurer shall allow the applicant up to 10 days within which to decide whether or not to sign the consent form, and no adverse underwriting decision may be made on the basis of the applicant's delay during this time period. Insurers need not provide pretest counseling to applicants but shall advise applicants of the availability of counseling in accordance with subsection (C) of this rule.
- C. The written consent form, which shall be approved by the Director in advance of its use, shall contain the following information:
 - 1. Purpose of the consent form. The form shall contain a clear disclosure that the test to be performed is a test for the presence of HIV antibodies, antigens, or the virus, and that underwriting decisions will be based on the results of such test. The form shall further provide notice of a period of not less than 10 days during which the applicant may decide whether or not to sign the form, along with a disclosure that the applicant's refusal to be tested may be used as a reason to deny coverage.
 - 2. Information on HIV. The form shall provide clear, concise, and accurate information on how the disease is spread and what behavior places persons at risk of contracting the virus.
 - 3. Pretest counseling considerations. The written consent form shall contain information advising the applicant that counseling is recommended by many public health organizations and that the applicant may obtain such counseling at the applicant's own expense. The form shall contain current information as provided by the Department regarding the availability in Arizona of free confidential or anonymous counseling through county health departments and through other governmental or government-funded agencies.
 - 4. Disclosure of test results. The form shall advise the applicant that all test results shall be treated confidentially and that results shall be released only to the applicant and the named insurer or upon the applicant's written consent or as otherwise required or allowed by law, including but not limited to the release of information to the Department of Health Services as provided by law.

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5. Meaning of positive test results. The form shall advise the applicant of the type of test (including but not limited to antibody, antigen, or viral culture) to be used, and that a positive test result indicates that the applicant has been infected with HIV but does not necessarily have AIDS. The form shall explain that a positive test result will adversely affect the application for insurance.
 6. Consent. The consent form shall contain an attestation to be signed by the applicant or, if the applicant lacks legal capacity to consent, a person authorized pursuant to law to consent on behalf of the applicant, that he or she has read and understands the written consent form and voluntarily consents to the performance of a test for HIV and to the disclosure of the test results as described in the consent form. The applicant or the applicant's legal representative shall have the right to request and receive a copy of the written consent form. A photocopy of the form shall be as valid as the original.
 7. Optional release of information to personal physician. In addition to the release of information to the insurer provided in the consent form, the applicant may, at the applicant's option, consent to the release of information to the applicant's personal physician. The form shall provide for such release to be separately signed and dated by the applicant, or if the applicant lacks legal capacity to consent, by a person authorized pursuant to law to consent on behalf of the applicant.
 8. Time period during which release of information is effective. The consent form shall specify the time period during which any and all release provisions of the consent form shall be effective, but in no case shall such time period exceed 180 days from the date the consent form is signed by the applicant or the applicant's legal representative. No HIV-related information shall be released to any person after the expiration of that time period unless the insurer obtains the express written consent, pursuant to R20-6-1204, of the applicant or, if the applicant lacks legal capacity to consent, by a person authorized by law to consent on behalf of the applicant.
4. The signature of the applicant or of the person authorized by law to consent to such release, and the date the release form was signed.

Historical Note

Adopted effective March 7, 1994 (Supp. 94-1). R20-6-1204 recodified from R4-14-1204 (Supp. 95-1).

R20-6-1205. Benefits; Prohibited Practices

- A. Life and disability insurance policies or health care plans that provide benefits for prescription drugs shall provide benefits for any and all drugs and pharmaceutical forms of treatment for HIV and/or AIDS approved by the Food and Drug Administration pursuant to 21 U.S.C. Chapter 9 or licensed by the Food and Drug Administration pursuant to 42 U.S.C. Chapter 6A, including but not limited to Zidovudine, formerly Azidothymidine ("AZT"), Didanosine (ddl) and Zalcitabine (ddC), to the same extent as other prescription drugs and treatments.
- B. Insurers shall provide benefits for HIV, AIDS, and AIDS-related conditions in the same manner and to the same extent as those benefits provided for all other diseases.

Historical Note

Adopted effective March 7, 1994 (Supp. 94-1). R20-6-1205 recodified from R4-14-1205 (Supp. 95-1).

ARTICLE 13. RESERVED**ARTICLE 14. INSURANCE HOLDING COMPANY****R20-6-1401. Definitions**

- A. "The Act" means the Insurance Holding Company Systems Act, A.R.S. §§ 20-481 through 20-481.32.
- B. "Executive officer" means chief executive officer, chief operating officer, chief financial officer, treasurer, secretary, controller, and any other individual performing functions corresponding to those performed by the foregoing officers under whatever title.
- C. "Ultimate controlling person" means that person which is not controlled by any other person.
- D. Unless the context otherwise requires, other terms found in these regulations and in A.R.S. § 20-481 are used as defined in the Act. Other nomenclature or terminology is according to Title 20, A.R.S. or industry usage if not defined by Title 20, A.R.S.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1401 recodified from R4-14-1401 (Supp. 95-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1402. Acquisition of Control – Statement Filing**R20-6-1204. Release of Confidential HIV-related Information; Release Form**

- A. Except as required by law or authorized pursuant to a written consent to be tested, an insurer shall not disclose confidential HIV-related information to any person unless a written release form is executed by the applicant or, if the applicant lacks legal capacity to consent to such release, by a person authorized by law to consent to the release of information on behalf of the applicant. The applicant or the applicant's legal representative shall be entitled to receive a copy of the release. A photocopy shall be as valid as the original.
- B. Such written release form shall contain the following information:
 1. The name and address of the person to whom the information shall be disclosed;
 2. The specific purpose for which disclosure is to be made; and
 3. The time period during which the written release is to be effective but in no case shall such time period exceed 180 days from the date the release is signed by the applicant or the applicant's legal representative;

- A. A person required to file a statement pursuant to A.R.S. § 20-481.02 shall furnish the required information on Form A, attached hereto as Appendix A and on Form E, attached hereto as Appendix E, and described in subsections (D) and (E) of this section.
- B. The applicant shall promptly advise the Director of any changes in the information furnished on Form A arising subsequent to the date upon which the information was furnished but prior to the Director's disposition of the application.
- C. If the person being acquired is deemed to be a "domestic insurer" solely because of the provisions of A.R.S. § 20-481.02(G), the name of the domestic insurer on the cover page should be indicated as follows: "[ABC Insurance Company), a subsidiary of [XYZ Holding Company]." Where a A.R.S. § 20-481.02(G) insurer is being acquired, references to "the insurer" contained in Form A shall refer to both the domestic subsidiary insurer and the person being acquired.

- D. If a domestic insurer, including any person controlling a domestic insurer, is proposing a merger or acquisition pursuant to A.R.S. § 20-481.02(A), that person shall file a pre-acquisition notification form, Form E, which was developed pursuant to A.R.S. § 20-481.25(C).
- E. Additionally, if a non-domiciliary insurer licensed to do business in this state is proposing a merger or acquisition pursuant to A.R.S. § 20-481.25, that person shall file a pre-acquisition notification form, Form E. No pre-acquisition notification form need be filed if the acquisition is beyond the scope of A.R.S. § 20-481.25 as set forth in A.R.S. § 20-481.25(B).
- F. In addition to the information required by Form E, the Director may wish to require an expert opinion as to the competitive impact of the proposed acquisition.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1402 recodified from R4-14-1402 (Supp. 95-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1403. Annual Registration of Insurers – Statement Filing

- A. An insurer required to file an annual registration statement pursuant to A.R.S. § 20-481.09 shall furnish the required information on Form B, attached hereto as Appendix B, in accordance with the instructions contained in Appendix G.
- B. Amendments to Form B shall be filed in the Form B format with only those items which are being amended reported. Each such amendment shall include at the top of the cover page “Amendment No. (insert number) to Form B for (insert year)” and shall indicate the date of the amendment and not the date of the original filings.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1403 recodified from R4-14-1403 (Supp. 95-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1404. Summary of Registration – Statement Filing

An insurer required to file an annual registration statement pursuant to A.R.S. § 20-481.09 is also required to furnish information required on Form C, attached hereto as Appendix C.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1404 recodified from R4-14-1404 (Supp. 95-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1405. Alternative and Consolidated Registrations

- A. Any authorized insurer may file a registration statement on behalf of any affiliated insurer or insurers which are required to register under A.R.S. § 20-481.09. A registration statement may include information not required by the Act regarding any insurer in the insurance holding company system even if such insurer is not authorized to do business in this state. In lieu of filing a registration statement on Form B, the authorized insurer may file a copy of the registration statement or similar report which it is required to file in its state of domicile, provided:
 1. The statement or report contains substantially similar information required to be furnished on Form B; and
 2. The filing insurer is the principal insurance company in the insurance holding company system.
- B. The question of whether the filing insurer is the principal insurance company in the insurance holding company system is a question of fact and an insurer filing a registration statement or report in lieu of Form B on behalf of an affiliated

insurer, shall set forth a brief statement of facts which will substantiate the filing insurer’s claim that it, in fact, is the principal insurer in the insurance holding company system.

- C. With the prior approval of the Director, an unauthorized insurer may follow any of the procedures which could be done by an authorized insurer under subsection (A) above.
- D. Any insurer may take advantage of the provisions of A.R.S. §§ 20-481.15 or 20-481.16 without obtaining the prior approval of the Director. The Director, however, reserves the right to require individual filings if he or she deems such filings necessary in the interest of clarity, ease of administration or the public good.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1405 recodified from R4-14-1405 (Supp. 95-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1406. Disclaimers and Termination of Registration

- A. A disclaimer of affiliation or a request for termination of registration claiming that a person does not, or will not upon the taking of some proposed action, control another person, hereinafter referred to in this rule as the “subject,” shall contain the following information:
 1. The number of authorized, issued and outstanding voting securities of the subject;
 2. With respect to the person whose control is denied and all affiliates of such person, the number and percentage of shares of the subject’s voting securities which are held of record or known to be beneficially owned, and the number of shares concerning which there is a right to acquire, directly or indirectly;
 3. All material relationships and bases for affiliation between the subject and the person whose control is denied and all affiliates of such person;
 4. A statement explaining why the person should not be considered to control the subject.
- B. A request for termination of registration shall be deemed to have been granted unless the director, within 30 days after receipt of the request, notifies the registrant otherwise.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1406 recodified from R4-14-1406 (Supp. 95-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1407. Transactions Subject to Prior Notice – Notice Filing

- A. An insurer required to give notice of a proposed transaction pursuant to A.R.S. § 20-481.12 shall furnish the required information on Form D, attached hereto as Appendix D, in accordance with the instructions in Appendix G.
- B. Agreements for cost sharing services and management services shall at a minimum and as applicable:
 1. Identify the person providing services and the nature of such services;
 2. Set forth the methods to allocate costs;
 3. Require timely settlement, not less frequently than on a quarterly basis, and compliance with the requirements in the Accounting Practices and Procedures Manual;
 4. Prohibit advancement of funds by the insurer to the affiliate except to pay for services defined in the agreement;
 5. State that the insurer will maintain oversight for functions provided to the insurer by the affiliate and that the insurer will monitor services annually for quality assurance;

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6. Define books and records of the insurer to include all books and records developed or maintained under or related to the agreement;
 7. Specify that all books and records of the insurer are and remain the property of the insurer and are subject to control of the insurer;
 8. State that all funds and invested assets of the insurer are the exclusive property of the insurer, held for the benefit of the insurer and are subject to the control of the insurer;
 9. Include standards for termination of the agreement with and without cause;
 10. Include provisions for indemnification of the insurer in the event of gross negligence or willful misconduct on the part of the affiliate providing the services;
 11. Specify that, if the insurer is placed in receivership or seized by the Director under the Arizona Receivership Act:
 - a. All of the rights of the insurer under the agreement extend to the receiver or Director; and,
 - b. All books and records will immediately be made available to the receiver or the Director, and shall be turned over to the receiver or Director immediately upon the receiver or Director's request;
 12. Specify that the affiliate has no automatic right to terminate the agreement if the insurer is placed in receivership pursuant to the Arizona Receivership Act; and
 13. Specify that the affiliate will continue to maintain any systems, programs, or other infrastructure notwithstanding a seizure by the Director under the Arizona Receivership Act, and will make them available to the receiver, for so long as the affiliate continues to receive timely payment for services rendered.
4. A copy of the calculations determining that the proposed dividend is extraordinary. The work paper shall include the following information:
 - a. The amounts, dates and form of payment of all dividends or distributions, including regular dividends but excluding distributions of the insurer's own securities, paid within the period of 12 consecutive months ending on the date fixed for payment of the proposed dividend for which approval is sought and commencing on the day after the same day of the same month in the last preceding year;
 - b. Surplus as regards policyholders, total capital and surplus, as of the 31st day of December next preceding;
 - c. If the insurer is a life insurer, the net gain from operations for the 12-month period ending the 31st day of December next preceding;
 - d. If the insurer is not a life insurer, the net income, net realized capital gains for the 12-month period ending the 31st day of December next preceding and the two preceding 12-months periods; and
 - e. If the insurer is not a life insurer, the dividends paid to stockholders excluding distributions of the insurer's own securities in the preceding two calendar years.
 5. A balance sheet and statement of income for the period intervening from the last annual statement filed with the Director and the end of the month preceding the month in which the request for dividend approval is submitted; and
 6. A brief statement as to the effect of the proposed dividend upon the insurer's surplus and the reasonableness of surplus in relation to the insurer's outstanding liabilities and the adequacy of surplus relative to the insurer's financial needs.

- B.** Subject to A.R.S. § 20-481.19, each registered insurer shall report to the Director all dividends and other distributions to shareholders within 5 business days following the declaration thereof and at least 10 business days before payment of the dividend or distribution, including the same information required by subsection (A)(4)(a) through (e) of this rule.

Historical Note

New Section made by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4). Amended by final rulemaking at 23 A.A.R. 3311, effective January 16, 2018 (Supp. 17-4).

R20-6-1410. Adequacy of Surplus

The factors set for in A.R.S. §§ 20-481.01(F) and 20-481.24 are not intended to be an exhaustive list. In determining the adequacy and reasonableness of an insurer's surplus no single factor is necessarily controlling. The Director instead will consider the net effect of all of these factors plus other factors bearing on the financial condition of the insurer. In comparing the surplus maintained by other insurers, the Director will consider the extent to which each of these factors varies from company to company and in determining the quality and liquidity of investments in subsidiaries, the Director will consider the individual subsidiary and may discount or disallow its valuation to the extent that the individual investments so warrant.

Historical Note

New Section made by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1407 recodified from R4-14-1407 (Supp. 95-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1408. Enterprise Risk Report

The ultimate controlling person of an insurer required to file an enterprise risk report pursuant to A.R.S. § 481.10(D) shall furnish the required information on Form F, attached hereto as Appendix F.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1408 recodified from R4-14-1408 (Supp. 95-1). R20-6-1408 repealed; new Section R20-6-1408 made by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

R20-6-1409. Extraordinary Dividends and Other Distributions

- A.** Requests for approval of extraordinary dividends or any other extraordinary distribution to shareholders shall include the following:
1. The amount of the proposed dividend;
 2. The date established for payment of the dividend;
 3. A statement as to whether the dividend is to be in cash or other property and, if in property, a description thereof, its cost, and its fair market value together with an explanation of the basis for valuation;

Appendix A. Form A - Statement Regarding the Acquisition of Control of or Merger with a Domestic Insurer

STATEMENT REGARDING THE ACQUISITION OF CONTROL OF OR MERGER WITH A DOMESTIC INSURER

[Name of Domestic Insurer]

By

[Name of Acquiring Person (Applicant)]

Filed with the Arizona Department of Insurance

Dated: _____, 20____

Name, Title, address and telephone number of Individual to Whom Notices and Correspondence Concerning this Statement Should be Addressed:

Four horizontal lines for providing contact information.

ITEM 1. METHOD OF ACQUISITION

[State the name and address of the domestic insurer to which this application relates and a brief description of how control is to be acquired. State the federal identification number and the NAIC number of the domestic insurer.]

ITEM 2. IDENTITY AND BACKGROUND OF THE APPLICANT

- (a) State the name and address of the applicant seeking to acquire control over the insurer.
(b) If the applicant is not an individual, state the nature of its business operations for the past five years or for such lesser period as such person and any predecessors thereof shall have been in existence. Briefly describe the business intended to be done by the applicant and the applicant's subsidiaries.
(c) Furnish a chart or listing clearly presenting the identities of the inter-relationships among the applicant and all affiliates of the applicant, including NAIC numbers for all insurers. No affiliate need be identified if its total assets are equal to less than 1/2 of 1% of the total assets of the ultimate controlling person affiliated with the applicant. Indicate in such chart or listing the percentage of voting securities of each such person which is owned or controlled by the applicant or by any other such person. If control of any person is maintained other than by the ownership or control of voting securities, indicate the basis of such control. As to each person specified in such chart or listing indicate the type of organization (e.g. corporation, trust, partnership) and the state or other jurisdiction of domicile. If court proceedings involving a reorganization or liquidation are pending with respect to any such person, indicate which person, and set forth the title of the court, nature of proceedings and the date when commenced.]

ITEM 3. IDENTITY AND BACKGROUND OF INDIVIDUALS ASSOCIATED WITH THE APPLICANT

[On the biographical affidavit, include a third party background check, and state the following with respect to (1) the applicant if (s)he is an individual, or (2) all persons who are directors, executive officers or owners of 10% or more of the voting securities of the applicant if the applicant is not an individual.

- (a) Name and business address;
(b) Present principal business activity, occupation or employment including position and office held and the name, principal business and address of any corporation or other organization in which such employment is carried on;
(c) Material occupations, positions, officer or employment during the last 5 years, giving the starting and ending dates of each and the name, principal business and address of any business corporation or other organization in which each such occupation, position, office or employment was carried on: if any such occupation, position, office or employment required licensing by or registration with any federal, state or municipal governmental agency, indicate such fact, the current status of such licensing or registration, and an explanation of any surrender, revocation, suspension or disciplinary proceedings in connection therewith;
(d) Whether or not such person has ever been convicted in a criminal proceeding (excluding minor traffic violations) during the last 10 years and, if so, give the date, nature of conviction, name and location of court, and penalty imposed or other disposition of the case;

Such persons may also submit fingerprints and the fingerprint processing fee in accordance with A.R.S. § 20-481.03(B).]

ITEM 4. NATURE, SOURCE AND AMOUNT OF CONSIDERATION

- [(a) Describe the nature, source and amount of funds or other considerations used or to be used in effecting the merger or other acquisition of control. If any part of the same is represented or is to be represented by funds or other consideration borrowed or otherwise obtained for the purpose of acquiring, holding or trading securities, furnish a description of the transaction, the names of the parties thereto, the relationship, if any, between the borrower and the lender, the amounts borrowed or to be borrowed, and copies of all agreements, promissory notes and security arrangements relating thereto.]
- [(b) Explain the criteria used in determining the nature and amount of such consideration.]
- [(c) If the source of the consideration is a loan made in the lender's ordinary course of business and if the applicant wishes the identity of the lender to remain confidential, he must specifically request that the identity be kept confidential.)

ITEM 5. FUTURE PLANS OF INSURER

[Describe any plans or proposals which the applicant may have to declare an extraordinary dividend, to liquidate such insurer, to sell its assets to or merge it with any person or persons or to make any other material change in its business operations or corporate structure or management.]

ITEM 6. VOTING SECURITIES TO BE ACQUIRED

[State the number of shares of the insurer's voting securities which the applicant, its affiliates and any person listed in Item 3 plan to acquire, and the terms of the offer, request, invitation, agreement or acquisition, and a statement as to the method by which the fairness of the proposal was arrived at.]

ITEM 7. OWNERSHIP OF VOTING SECURITIES

[State the amount of each class of any voting security of the insurer which is beneficially owned or concerning which there is a right to acquire beneficial ownership by the applicant, its affiliates or any person listed in Item 3.]

ITEM 8. CONTRACTS, ARRANGEMENTS, OR UNDERSTANDINGS WITH RESPECT TO VOTING SECURITIES OF THE INSURER

[Give a full description of any contracts, arrangements or understandings with respect to any voting security of the insurer in which the applicant, its affiliates or any person listed in Item 3 is involved, including but not limited to transfer of any of the securities, joint ventures, loan or option arrangements, puts or calls, guarantees of loans, guarantees against loss or guarantees of profits, division of losses or profits, or the giving or withholding of proxies. Such description shall identify the persons with whom the contracts, arrangements or understandings have been entered into.]

ITEM 9. RECENT PURCHASES OF VOTING SECURITIES

[Describe any purchases of any voting securities of the insurer by the applicant, its affiliates or any person listed in Item 3 during the 12 calendar months preceding the filing of this statement. Include in the description the dates of purchase, the names of the purchasers, and the consideration paid or agreed to be paid therefore. State whether any such shares so purchased are hypothecated.]

ITEM 10. RECENT RECOMMENDATIONS TO PURCHASE

[Describe any recommendations to purchase any voting security of the insurer made by the applicant, its affiliates or any person listed in Item 3, or by anyone based upon interviews or at the suggestion of the applicant, its affiliates or any person listed in Item 3 during the 12 calendar months preceding the filing of this statement.)

ITEM 11. AGREEMENTS WITH BROKER-DEALERS

[Describe the terms of any agreement, contract or understanding made with any broker-dealer as to solicitation of voting securities of the insurer for tender and the amount of any fees, commissions or other compensation to be paid to broker-dealers with regard thereto.]

ITEM 12. FINANCIAL STATEMENTS AND EXHIBITS

- [(a) Financial statements, exhibits, and three-year financial projections of the insurer(s) shall be attached to this statement as an appendix, but list under this item the financial statements and exhibits so attached.]
- [(b) The financial statements shall include the annual financial statements of the persons identified in Item 2(c) for the preceding five fiscal years (or for such lesser period as such applicant and its affiliates and any predecessors thereof shall have been in existence), and similar information covering the period from the end of such person's last fiscal year, if such information is available. The statements may be prepared on either an individual basis, or, unless the Director otherwise requires, on a consolidated basis if consolidated statements are prepared in the usual course of business.

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The annual financial statements of the applicant shall be accompanied by the certificate of an independent public accountant to the effect that such statements present fairly the financial position of the applicant and the results of its operations for the year then ended, in conformity with generally accepted accounting principles or with requirements of insurance or other accounting principles prescribed or permitted under law. If the applicant is an insurer which is actively engaged in the business of insurance, the financial statements need not be certified, provided they are based on the Annual Statement of the person filed with the insurance department of the person's domiciliary state and are in accordance with the requirements of insurance or other accounting principles prescribed or permitted under the law and regulations of the state.]

- [(c) File as exhibits copies of all tender offers for, requests or invitations for, tenders of, exchange offers for, and agreements to acquire or exchange any voting securities of the insurer and (if distributed) of additional soliciting material relating thereto, any proposed employment, consultation, advisory or management contracts concerning the insurer, annual reports to the stockholders of the insurer and the applicant for the last two fiscal years, and any additional documents or papers required by Form A or Appendix G.)

ITEM 13. AGREEMENT REQUIREMENTS FOR ENTERPRISE RISK MANAGEMENT

Applicant agrees to provide, to the best of its knowledge and belief, the information required by Form F within fifteen (15) days after the end of the month in which the acquisition of control occurs.

ITEM 14. SIGNATURE AND CERTIFICATION

[Signature and certification required as follows:]

SIGNATURE

Pursuant to the requirements of A.R.S. § 20-481.02 _____ has caused this application to be duly signed on its behalf in the City of _____ and State of _____ on the _____ day of _____, 20____.

(SEAL)

Name of Applicant

BY _____ (Name)

_____ (Title)

Attest:

(Signature of Officer)

(Title)

CERTIFICATION

The undersigned deposes and says that (s)he has duly executed the attached application dated _____, 20____, for and on behalf of _____; that (s)he is the _____ (Name of Applicant) (Title of Officer)

of such company and that (s)he is authorized to execute and file such instrument. Deponent further says that (s)he is familiar with the instrument and the contents thereof, and that the facts therein set forth are true to the best of his/her knowledge, information and belief.

(Signature)

(Type or print name beneath)

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

Appendix B. Form B - Insurance Holding Company System Annual Registration Statement
INSURANCE HOLDING COMPANY SYSTEM ANNUAL REGISTRATION STATEMENT

Filed with the Insurance Department of the State of Arizona

By

[Name of Registrant]

On Behalf of Following Insurance Companies

Table with 2 columns: Name, Address. Includes three horizontal lines for data entry.

Date: _____, 20____

Name, Title, Address and telephone number of Individual to Whom Notices and Correspondence Concerning This Statement Should Be Addressed:

Three horizontal lines for providing contact information.

ITEM 1. IDENTITY AND CONTROL OF REGISTRANT

[Furnish the exact name of each insurer registering or being registered (hereinafter called "the Registrant"), the federal identification number and the NAIC number of each, the home office address and principal executive offices of each; the date on which each Registrant became part of the insurance holding company system; and the method(s) by which control of each Registrant was acquired and is maintained.]

ITEM 2. ORGANIZATIONAL CHART

[Furnish a chart or listing clearly presenting the identities of and interrelationships among all affiliated persons within the insurance holding company system. The chart or listing should show the percentage of each class of voting securities of each affiliate which is owned, directly or indirectly, by another affiliate. If control of any person within the system is maintained other than by the ownership or control of voting securities, indicate the basis of control. As to each person specified in the chart or listing, indicate the type of organization (e.g., - corporation, trust, partnership) and the state or other jurisdiction of domicile.]

ITEM 3. THE ULTIMATE CONTROLLING PERSON

[As to the ultimate controlling person in the insurance holding company system furnish the following information:

- (a) Name;
(b) Home office address;
(c) Principal executive office address;
(d) The organizational structure of the person, i.e., corporation, partnership, individual, trust, etc.;
(e) The principal business of the person;
(f) The name and address of any person who holds or owns 10% or more of any class of voting security, the class of such security, the number of shares held of record or known to be beneficially owned, and the percentage of class so held or owned; and
(g) If court proceedings involving a reorganization or liquidation are pending, indicate the title and location of the court, the nature of proceedings and the date when commenced.]

ITEM 4. BIOGRAPHICAL INFORMATION

[If the ultimate controlling person is a corporation, an organization, a limited liability company, or other legal entity, furnish the following information for the directors and executive officers of the ultimate controlling person: the individual's name and address, his or her principal occupation and all offices and positions held during the past 5 years, and any conviction of crimes other than minor traffic violations. If the ultimate controlling person is an individual, furnish the individual's name and address, his

or her principal occupation and all offices and positions held during the past 5 years, and any conviction of crimes other than minor traffic violations.]

ITEM 5. TRANSACTIONS AND AGREEMENTS

[Briefly describe the following agreements in force, and transactions currently outstanding or which have occurred during the last calendar year between the Registrant and its affiliates:

- (a) Loans, other investments, or purchases, sales or exchanges of securities of the affiliates by the Registrant or of the Registrant by its affiliates;
- (b) Purchases, sales or exchanges of assets;
- (c) Transactions not in the ordinary course of business;
- (d) Guarantees or undertakings for the benefit of an affiliate which result in an actual contingent exposure of the Registrant's assets to liability, other than insurance contracts entered into in the ordinary course of the Registrant's business;
- (e) All management agreements, service contracts and all cost-sharing arrangements;
- (f) Reinsurance agreements;
- (g) Dividends and other distributions to shareholders;
- (h) Consolidated tax allocation agreements; and
- (i) Any pledge of the Registrant's stock and/or of the stock of any subsidiary or controlling affiliate, for a loan made to any member of the insurance holding company system.

No information need be disclosed if such information is not material for purposes of A.R.S. § 20-481.09.

Sales, purchases, exchanges, loans or extensions of credit, investments or guarantees involving 1/2 of 1% or less of the Registrant's admitted assets as of the 31st day of December next preceding shall not be deemed material.

The description shall be in a manner as to permit the proper evaluation thereof by the Director and shall include at least the following: the nature and purpose of the transaction, the nature and amounts of any payments or transfers of assets between the parties, the identity of all parties to the transaction, and relationship of the affiliated parties to the Registrant.]

ITEM 6. LITIGATION OR ADMINISTRATIVE PROCEEDINGS

[A brief description of any litigation or administrative proceedings of the following types, either then pending or concluded within the preceding fiscal year, to which the ultimate controlling person or any of its directors or executive officers was a party or of which the property of any such person is or was the subject; give the names of the parties and the court or agency in which the litigation or proceeding is or was pending:

- (a) Criminal prosecutions or administrative proceedings by any government agency or authority which may be relevant to the trustworthiness of any party thereto; and
- (b) Proceedings which may have a material effect upon the solvency or capital structure of the ultimate holding company including, but not necessarily limited to, bankruptcy, receivership or other corporate reorganizations.]

ITEM 7.a. STATEMENT REGARDING PLAN OR SERIES OF TRANSACTIONS

[The insurer shall furnish a statement that transactions entered into since the filing of the prior year's annual registration statement are not part of a plan or series of like transactions, the purpose of which is to avoid statutory threshold amounts and the review that might otherwise occur.]

ITEM 7.b. STATEMENT REGARDING CORPORATE GOVERNANCE AND INTERNAL CONTROLS

[The insurer shall furnish a statement that the insurer's board of directors oversees corporate governance and internal controls of the insurer and that the insurer's officers or senior management have approved, implemented and maintain and monitor corporate governance and internal control procedures.]

ITEM 8. FINANCIAL STATEMENTS AND EXHIBITS

- (a) Financial statements and exhibits shall be attached to this statement as an appendix, but list under this item the financial statements and exhibits so attached.
- (b) If the ultimate controlling person is a corporation, an organization, a limited liability company, or other legal entity, the financial statements shall include the annual financial statements of the ultimate controlling person in the insurance holding company system as of the end of the person's latest fiscal year.

Department of Insurance

If at the time of the initial registration, the annual financial statements for the latest fiscal year are not available, annual statements for the previous fiscal year may be filed and similar financial information shall be filed for any subsequent period to the extent such information is available. Such financial statements may be prepared on either an individual basis; or, unless the Director otherwise requires, on a consolidated basis if consolidated statements are prepared in the usual course of business.

Other than with respect to the foregoing, such financial statement shall be filed in a standard form and format adopted by the National Association of Insurance Commissioners, unless an alternative form is accepted by the Director. Documentation and financial statements filed with the Securities and Exchange Commission or audited GAAP financial statements shall be deemed to be an appropriate form and format.

Unless the Director otherwise permits, the annual financial statements shall be accompanied by the certificate of an independent public accountant to the effect that the statements present fairly the financial position of the ultimate controlling person and the results of its operations for the year then ended, in conformity with generally accepted accounting principles or with requirements of insurance or other accounting principles prescribed or permitted under law. If the ultimate controlling person is an insurer which is actively engaged in the business of insurance, the annual financial statements need not be certified, provided they are based on the Annual Statement of the insurer's domiciliary State and are in accordance with requirements of insurance or other accounting principles prescribed or permitted under the law and regulations of that state.

Any ultimate controlling person who is an individual may file personal financial statements that are reviewed rather than audited by an independent public accountant. The review shall be conducted in accordance with standards for review of personal financial statements published in the Personal Financial Statements Guide by the American Institute of Certified Public Accountants. Personal financial statements shall be accompanied by the independent public accountant's Standard Review Report stating that the accountant is not aware of any material modifications that should be made to the financial statements in order for the statements to be in conformity with generally accepted accounting principles.

- (c) Exhibits shall include copies of the latest annual reports to shareholders of the ultimate controlling person and proxy material used by the ultimate controlling person; and any additional documents or papers required by Forms B and G.]

ITEM 9. FORM C REQUIRED

[A Form C, Summary of Registration Statement, must be prepared and filed with this Form B.]

ITEM 10. SIGNATURE AND CERTIFICATION

[Signature and certification required as follows:]

SIGNATURE

Pursuant to the requirements of A.R.S. § 20-481.09, Registrant _____ has caused this annual registration statement to be duly signed on its behalf in the City of _____ and State of _____ on the _____ day of _____, 20_____.

(SEAL)

Name of Applicant

BY _____
(Name)

(Title)

Attest:

(Signature of Officer)

(Title)

CERTIFICATION

The undersigned deposes and says that (s)he has duly executed the attached application dated _____, 20____, for and on behalf of _____; that (s)he is the _____ of such company and that (s)he is authorized to execute and file such instrument. Deponent further says that (s)he is familiar with the instrument and the contents thereof, and that the facts therein set forth are true to the best of his/her knowledge, information and belief.

 (Signature)

 (Type or print name beneath)

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

Appendix C. Form C - Summary of Registration Statement

SUMMARY OF CHANGES TO REGISTRATION STATEMENT

Filed with the Insurance Department of the State of Arizona

By

[Name of Registrant]

On Behalf of Following Insurance Companies

Name Address

Dated: _____, 20____

Name, Title, Address and telephone number of Individual to Whom Notices and Correspondence Concerning This Statement Should Be Addressed:

[Furnish a brief description of all items in the current annual registration statement which represent changes from the prior year's annual registration statement. The description shall be in a manner as to permit the proper evaluation thereof by the Director, and shall include specific references to Item numbers in the annual registration statement and to the terms contained therein.

Changes occurring under Item 2 of Form B insofar as changes in the percentage of each class of voting securities held by each affiliate is concerned, need only be included where such changes are ones which result in ownership or holdings of 10% or more of voting securities, loss or transfer of control, or acquisition or loss of partnership interest.

Changes occurring under Item 4 of Form B need only be included where: an individual is, for the first time, made a director or executive officer of the ultimate controlling person; a director or executive officer terminates his or her responsibilities with the ultimate controlling person; or in the event an individual is named president of the ultimate controlling person.

If a transaction disclosed on the prior year's annual registration statement has been changed, the nature of such change shall be included. If a transaction disclosed on the prior year's annual registration statement has been effectuated, furnish the mode of completion and any flow of funds between affiliates resulting from the transaction.

The insurer shall furnish a statement that transactions entered into since the filing of the prior year's annual registration statement are not part of a plan or series of like transactions whose purpose it is to avoid statutory threshold amounts and the review that might otherwise occur.]

SIGNATURE AND CERTIFICATION

[Signature and certification required as follows:]

Pursuant to the requirements of A.R.S. § 20-481.09, Registrant _____ has caused this annual registration statement to be duly signed on its behalf in the City of _____ and State of _____ on the _____ day of _____, 20____.

(SEAL)

Name of Applicant

BY _____
(Name)

(Title)

Attest:

(Signature of Officer)

(Title)

CERTIFICATION

Department of Insurance

The undersigned deposes and says that (s)he has duly executed the attached annual registration statement dated _____, 20____, for and on behalf of _____; that (s)he is the _____
(Name of Applicant) (Title of Officer)
of such company and that (s)he is authorized to execute and file such instrument. Deponent further says that (s)he is familiar with the instrument and the contents thereof, and that the facts therein set forth are true to the best of his/her knowledge, information and belief.

(Signature)

(Type or print name beneath)

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

Appendix D. Form D - Prior Notice of a Transaction

PRIOR NOTICE OF A TRANSACTION

Filed with the Insurance Department of the State of Arizona

By

[Name of Registrant]

On Behalf of Following Insurance Companies

Name Address

Horizontal lines for listing insurance companies.

Dated: _____, 20____

Name, Title, Address and telephone number of Individual to Whom Notices and Correspondence Concerning This Statement Should Be Addressed:

Horizontal lines for contact information.

ITEM 1. IDENTITY OF PARTIES TO TRANSACTION

[Furnish the following information for each of the parties to the transaction:

- (a) Name;
(b) Home office address;
(c) Principal executive office address;
(d) The organizational structure, i.e. corporation, partnership, individual, trust, etc.;
(e) A description of the nature of the parties' business operations;
(f) Relationship, if any, of other parties to the transaction to the insurer filing the notice, including any ownership or debtor/creditor interest by any other parties to the transaction in the insurer seeking approval, or by the insurer filing the notice in the affiliated parties;
(g) Where the transaction is with a non-affiliate, the name(s) of the affiliate(s) which will receive, in whole or in substantial part, the proceeds of the transaction.]

ITEM 2. DESCRIPTION OF THE TRANSACTION

[Furnish the following information for each transaction for which notice is being given:

- (a) A statement as to whether notice is being given under A.R.S. § 20-481.12(B);
(b) A statement of the nature of the transaction;
(c) If a notice for amendments or modifications, the reasons for the change and the financial impact on the domestic insurer;
(d) A statement of how the transaction meets the "fair and reasonable" standard of A.R.S. § 20-481.12(A)(1); and
(e) The proposed effective date of the transaction.]

ITEM 3. SALES, PURCHASES, EXCHANGES, LOANS, EXTENSIONS OF CREDIT, GUARANTEES OR INVESTMENTS

[Furnish a brief description of the amount and source of funds, securities, property or other consideration for the sale, purchase, exchange, loan, extension of credit, guarantee, or investment, whether any provision exists for purchase by the insurer filing notice, by any party to the transaction, or by any affiliate of the insurer filing notice, a description of the terms of any securities being received, if any, and a description of any other agreements relating to the transaction such as contracts or agreements for services, consulting agreements and the like. If the transaction involves other than cash, furnish a description of the consideration, its cost and its fair market value, together with an explanation of the basis for evaluation.

If the transaction involves a loan, extension of credit or a guarantee, furnish a description of the maximum amount which the insurer will be obligated to make available under such loan, extension of credit or guarantee, the date on which the credit or guarantee will terminate, and any provisions for the accrual of or deferral of interest.

If the transaction involves an investment, guarantee or other arrangement, state the time period during which the investment, guarantee or other arrangement will remain in effect, together with any provisions for extensions or renewals of such investments, guarantees or arrangements. Furnish a brief statement as to the effect of the transaction upon the insurer's surplus.

No notice need be given if the maximum amount which can at any time be outstanding or for which the insurer can be legally obligated under the loan, extension of credit or guarantee is less than (a) in the case of non-life insurers, the lesser of 3% of the insurer's admitted assets or 25% of surplus as regards policyholders, or (b) in the case of life insurers, 3% of the insurer's admitted assets, each as of the 31st day of December next preceding.]

ITEM 4. LOANS OR EXTENSIONS OF CREDIT TO A NON-AFFILIATE

[If the transaction involves a loan or extension of credit to any person who is not an affiliate, furnish a brief description of the agreement or understanding whereby the proceeds of the proposed transaction, in whole or in substantial part, are to be used to make loans or extensions of credit to, to purchase the assets of, or to make investments in, any affiliate of the insurer making such loans or extensions of credit, and specify in what manner the proceeds are to be used to loan to, extend credit to, purchase assets of or make investments in any affiliate. Describe the amount and source of funds, securities, property or other consideration for the loan or extension of credit and, if the transaction is one involving consideration other than cash, a description of its cost and its fair market value together with an explanation of the basis for evaluation. Furnish a brief statement as to the effect of the transaction upon the insurer's surplus.

No notice need be given if the loan or extension of credit is one which equals less than, in the case of non-life insurers, the lesser of 3% of the insurer's admitted assets or 25% of surplus as regards policyholders or, with respect to life insurers, 3% of the insurer's admitted assets, each as of the 31st day of December next preceding.]

ITEM 5. REINSURANCE

[If the transaction is a reinsurance agreement or modification thereto, as described by A.R.S. § 20-481.12(B)(3)(b), or a reinsurance pooling agreement or modification thereto as described by A.R.S. § 20-481.12(B)(3)(a), furnish a description of the known and/or estimated amount of liability to be ceded and/or assumed in each calendar year, the period of time during which the agreement will be in effect, and a statement whether an agreement or understanding exists between the insurer and non-affiliate to the effect that any portion of the assets constituting the consideration for the agreement will be transferred to one or more of the insurer's affiliates. Furnish a brief description of the consideration involved in the transaction, and a brief statement as to the effect of the transaction upon the insurer's surplus.

No notice need be given for reinsurance agreements or modifications thereto if the reinsurance premium or a change in the insurer's liabilities, or the projected reinsurance premium or change in the insurer's liabilities in any of the next three years, in connection with the reinsurance agreement or modification thereto is less than 5% of the insurer's surplus as regards policyholders, as of the 31st day of December next preceding. Notice shall be given for all reinsurance pooling agreements including modifications thereto.]

ITEM 6. MANAGEMENT AGREEMENTS, SERVICE AGREEMENTS AND COST-SHARING ARRANGEMENTS

[For management and service agreements, furnish:

- (a) A brief description of the managerial responsibilities, or services to be performed;
- (b) A brief description of the agreement, including a statement of its duration, together with brief descriptions of the basis for compensation and the terms under which payment or compensation is to be made.]

[For cost-sharing arrangements, furnish:

- (a) A brief description of the purpose of the agreement;
- (b) A description of the period of time during which the agreement is to be in effect;
- (c) A brief description of each party's expenses or costs covered by the agreement;
- (d) A brief description of the accounting basis to be used in calculating each party's costs under the agreement;]
- (e) A brief statement as to the effect of the transaction upon the insurer's policyholder surplus;
- (f) A statement regarding the cost allocation methods that specifies whether proposed charges are based on "cost or market." If market based, rationale for using market instead of cost, including justification for the company's determination that amounts are fair and reasonable; and
- (g) A statement regarding compliance with the NAIC Accounting Practices and Procedure Manual regarding expense allocation.]

ITEM 7. SIGNATURE AND CERTIFICATION

[Signature and certification required as follows:]

SIGNATURE

Pursuant to the requirements of A.R.S. § 20-481.09, _____ has caused this application to be duly signed on its behalf in the City of _____ and State of _____ on the _____ day of _____, 20_____.

Department of Insurance

(SEAL)

By _____
Name of Applicant

(Title)

Attest:

(Signature of Officer)

(Title)

CERTIFICATION

The undersigned deposes and says that (s)he has duly executed the attached application dated _____, 20____, for and on behalf of _____; that (s)he is the _____
(Name of Applicant) (Title of Officer)

of such company and that (s)he is authorized to execute and file such instrument. Deponent further says that (s)he is familiar with the instrument and the contents thereof, and that the facts therein set forth are true to the best of his/her knowledge, information and belief.

(Signature) _____

(Type or print name beneath) _____

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). Amended by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

Appendix E. Form E - Pre-acquisition Notification Form Regarding the Potential Competitive Impact of a Proposed Merger or Acquisition by a Non-domiciliary Insurer Doing Business in this State or by a Domestic Insurer

PRE-ACQUISITION NOTIFICATION FORM
REGARDING THE POTENTIAL COMPETITIVE IMPACT
OF A PROPOSED MERGER OR ACQUISITION BY A
NON-DOMICILIARY INSURER DOING BUSINESS IN THIS
STATE OR BY A DOMESTIC INSURER

Name of Applicant

Name of Other Person Involved in Merger or Acquisition

Filed with the Arizona Department of Insurance

Dated: _____, 20____

Name, title, address and telephone number of person completing this statement:

Four horizontal lines for providing name, title, address, and telephone number.

ITEM 1. NAME AND ADDRESS

[State the name and addresses of the persons who hereby provide notice of their involvement in a pending acquisition or change in corporate control.]

ITEM 2. NAME AND ADDRESSES OF AFFILIATED COMPANIES

[State the names and addresses of the persons affiliated with those listed in Item 1. Describe their affiliations.]

ITEM 3. NATURE AND PURPOSE OF THE PROPOSED MERGER OR ACQUISITION

[State the nature and purpose of the proposed merger or acquisition.]

ITEM 4. NATURE OF BUSINESS

[State the nature of the business performed by each of the persons identified in response to Item 1 and Item 2.]

ITEM 5. MARKET AND MARKET SHARE

[State specifically what market and market share in each relevant insurance market the persons identified in Item 1 and Item 2 currently enjoy in this state. Provide historical market and market share data for each person identified in Item 1 and Item 2 for the past five years and identify the source of such data. Provide a determination as to whether the proposed acquisition or merger, if consummated, would violate the competitive standards of the state as stated in A.R.S. § 20-481.25(D). If the proposed acquisition or merger would violate competitive standards, provide justification of why the acquisition or merger would not substantially lessen competition or create a monopoly in the state.]

For purposes of this question, market means direct written insurance premium in this state for a line of business as contained in the annual statement required to be filed by insurers licensed to do business in this state.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). Appendix E. Instructions on Forms, renumbered to Appendix G; new Appendix E. Form E made by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

Department of Insurance

Appendix F. Form F - Enterprise Risk Report

ENTERPRISE RISK REPORT

Filed with the Arizona Department of Insurance

Name of Registrant/Applicant

On Behalf of/Related to Following Insurance Companies

Name Address

Blank lines for company names and addresses.

Dated: _____, 20____

Name, Title, Address and telephone number of Individual to Whom Notices and Correspondence Concerning This Statement Should be Addressed:

Blank lines for individual contact information.

ITEM 1. ENTERPRISE RISK

[The Registrant/Applicant, to the best of its knowledge and belief, shall provide information regarding the following areas that could produce enterprise risk as defined in A.R.S. § 20-481(4), provided such information is not disclosed in the Insurance Holding Company System Annual Registration Statement filed on behalf of itself or another insurer for which it is the ultimate controlling person:

Any material developments regarding strategy, internal audit findings, compliance or risk management affecting the insurance holding company system;

Acquisition or disposal of insurance entities and reallocating of existing financial or insurance entities with the insurance holding company system;

Any changes of shareholders of the insurance holding company system exceeding ten percent (10%) or more of voting securities;

Developments in various investigations, regulatory activities or litigation that may have a significant bearing or impact on the insurance holding company system'

Business plan of the insurance holding company system and summarized strategies for next 12 months;

Identification of material concerns of the insurance holding company system raised by supervisory college, if any, in last year;

Identification of insurance holding company system capital resources and material distribution patterns;

Identification of any negative movement, or discussions with rating agencies which may have caused, or may cause, potential negative movement in the credit ratings and individual insurer financial strength ratings assessment of the insurance holding company system (include both the rating score and outlook);

Information on corporate or parental guarantees throughout the holding company and the expected source of liquidity should such guarantees be called upon; and

Identification of any material activity or development of the insurance holding company system that, in the opinion of senior management, could adversely affect the insurance holding company system.

[The Registrant/Applicant may attach the appropriate form most recently filed with the U.S. Securities and Exchange Commission, provided the Registrant/Applicant includes specific references to those areas listed in Item 1 for which the form provides responsive information. If the Registrant/Applicant is not domiciled in the U.S., it may attach its most recent public audited financial statement filed in its country of domicile, provided the Registrant/Applicant includes specific references to those areas listed in Item 1 for which the financial statement provides responsive information.]

ITEM 2. OBLIGATION TO REPORT

[If the Registrant/Applicant has not disclosed any information pursuant to Item 1, the Registrant/Applicant shall include a statement affirming that, to the best of its knowledge and belief, it has not identified enterprise risk subject to disclosure pursuant to Item 1.]

Historical Note

Appendix F, Form F made by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

Appendix G. Instructions on Forms A, B, C, D, E and F**INSTRUCTIONS ON FORMS A, B, C, D, E AND F****FORMS - GENERAL REQUIREMENTS**

Forms A, B, C, D, E and F are intended to be guides in the preparation of the statements required by A.R.S. §§ 20-481.02, 20-481.09, 20-481.12 and 20-481.25. They are not intended to be blank forms which are to be filled in. The statements filed shall contain the numbers and captions of all items, but the text of the items may be omitted provided the answers thereto are prepared in such a manner as to indicate clearly the scope and coverage of the items. All instructions, whether appearing under the items of the form or elsewhere therein, are to be omitted. Unless expressly provided otherwise, if any item is inapplicable or the answer thereto is in the negative, an appropriate statement to that effect shall be made.

One original paper statement excluding exhibits, and all other papers and documents shall be filed with the Director. The statement shall be signed in the manner prescribed on the form. If the signature of any person is affixed pursuant to a power of attorney or other similar authority, a copy of such power of attorney or other authority shall also be filed with the statement. All paper filings shall be by personal delivery or mail addressed to: Arizona Department of Insurance, Financial Affairs Division.

In addition to the filed paper statement, a copy of the statement, including exhibits, and all other papers and documents filed as a part thereof, shall be filed electronically.

All filed documents shall be easily readable and suitable for review and reproduction. Debits in credit categories and credits in debit categories shall be designated so as to be clearly distinguishable as such on photocopies. Statements shall be in the English language and monetary values shall be stated in United States currency. If any exhibit or other paper or document filed with the statement is in a foreign language, it shall be accompanied by a translation into the English language and any monetary value shown in a foreign currency normally shall be converted into United States currency.

If an applicant requests a hearing on a consolidated basis under A.R.S. § 20-481.07, in addition to filing the Form A with the Director, the applicant shall file a copy of Form A with the National Association of Insurance Commissioners (NAIC) in electronic form.

FORMS - INCORPORATION BY REFERENCE, SUMMARIES AND OMISSIONS

Information required by any item of Form A, Form B, Form D, Form E or Form F may be incorporated by reference in answer or partial answer to any other item. Information contained in any financial statement, annual report, proxy statement, statement filed with a governmental authority, or any other document may be incorporated by reference in answer or partial answer to any item of Form A, Form B, Form D, Form E or Form F provided the document is filed as an exhibit to the statement. Excerpts of documents may be filed as exhibits if the documents are extensive. Documents currently on file with the Director which were filed within three years need not be attached as exhibits. References to information contained in exhibits or in documents already on file shall clearly identify the material and shall specifically indicate that such material is to be incorporated by reference in answer to the item. Matter shall not be incorporated by reference in any case where such incorporation would render the statement incomplete, unclear or confusing.

Where an item requires a summary or outline of the provisions of any document, only a brief statement shall be made as to the pertinent provisions of the document. In addition to the statement, the summary or outline may incorporate by reference particular parts of any exhibit or document currently on file with the Director which was filed within three years and may be qualified in its entirety by such reference. In any case where two or more documents required to be filed as exhibits are substantially identical in all material respects except as to the parties thereto, the dates of execution, or other details, a copy of only one of the documents need be filed with a schedule identifying the omitted documents and setting forth the material details in which the documents differ from the documents, a copy of which is filed.

FORMS - INFORMATION UNKNOWN OR UNAVAILABLE AND EXTENSION OF TIME TO FURNISH

If it is impractical to furnish any required information, document or report at the time it is required to be filed, there may be filed with the Director as a separate document:

- (1) Identifying the information, document or report in question;
- (2) Stating why the filing thereof at the time required is impractical; and
- (3) Requesting an extension of time for filing the information, document or report to a specified date. The request for extension shall be deemed granted unless the Director within 60 days after receipt thereof enters an order denying the request.

FORMS - ADDITIONAL INFORMATION AND EXHIBITS

In addition to the information expressly required to be included in Form A, Form B, Form C, Form D, Form E and Form F, the Director may request such further information, if any, as may be necessary to make the information contained therein not misleading. The person filing may also file such exhibits as it may desire in addition to those expressly required by the forms. The exhibits shall be so marked as to indicate clearly the subject matters to which they refer. Changes to Forms A, B, C, D, E or F shall include on the top of the cover page the phrase: "Change No. (insert number) to" and shall indicate the date of the change and not the date of the original filing.

Historical Note

Appendix G. *Instructions on Forms*, renumbered from Appendix E. *Instructions on Forms*, with heading amended to include new Appendix F, by exempt rulemaking at 21 A.A.R. 54, effective February 14, 2015 (Supp. 14-4).

ARTICLE 15. RESERVED**ARTICLE 16. CREDIT FOR REINSURANCE****R20-6-1601. Credit for Reinsurance – Reinsurer Licensed in Arizona**

Pursuant to A.R.S. § 20-261.05(B), the Director shall allow credit for reinsurance ceded by a domestic insurer to an assuming insurer that was licensed in Arizona as of any date on which statutory financial statement credit for reinsurance is claimed.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-1601 recodified from R4-14-1601 (Supp. 95-1). Amended effective October 9, 1998 (Supp. 98-4). Amended by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1602. Credit for Reinsurance – Accredited Reinsurers

- A. Pursuant to A.R.S. § 20-261.05(C), the Director shall allow credit for reinsurance ceded by a domestic insurer to an assuming insurer that is accredited as a reinsurer in Arizona as of the date on which statutory financial statement credit for reinsurance is claimed.
- B. An accredited reinsurer must:
 1. File a properly executed Form AR-1, attached as Appendix A to this Article, as evidence of its submission to the Director's jurisdiction and to the Director's authority to examine its books and records;
 2. File with the Director a certified copy of a certificate of authority or other acceptable evidence that it is licensed to transact insurance or reinsurance in at least one state, or, in the case of a U.S. branch of an alien assuming insurer, is entered through and licensed to transact insurance or reinsurance in at least one state;
 3. File annually with the Director a copy of its annual statement filed with the insurance department of its state of domicile or, in the case of an alien assuming insurer, with the state through which it is entered and in which it is licensed to transact insurance or reinsurance, and a copy of its most recent audited financial statement; and
 4. Maintain a surplus as regards policyholders in an amount not less than \$20 million, or obtain the affirmative approval of the Director upon a finding that it has adequate financial capacity to meet its reinsurance obligations and is otherwise qualified to assume reinsurance from domestic insurers.
- C. If the Director determines that the assuming insurer has failed to meet or maintain any of these qualifications, the Director may upon written notice and opportunity for hearing, suspend or revoke the accreditation. Credit shall not be allowed a domestic ceding insurer under this Section if the assuming insurer's accreditation has been revoked by the Director, or if the reinsurance was ceded while the assuming insurer's accreditation was under suspension by the Director.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-1602 recodified from R4-14-1602 (Supp. 95-1). R20-6-1602 renumbered to R20-6-1607; new Section made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1603. Credit for Reinsurance – Reinsurer Domiciled in Another State

- A. Pursuant to A.R.S. § 20-261.05(D), the Director shall allow credit for reinsurance ceded by a domestic insurer to an assuming insurer that as of any date on which statutory financial credit for reinsurance is claimed:
 1. Is domiciled in (or, in the case of a U.S. branch of an alien assuming insurer, is entered through) a state that employs standards regarding credit for reinsurance substantially similar to those applicable under A.R.S. §§ 20-261.01 through 20-261.08 and this Article;
 2. Maintains a surplus as regards policyholders in an amount not less than \$20 million; and
 3. Files a properly executed Form AR-1 (Exhibit A) with the Director as evidence of the submission to the Director's authority to examine its books and records.
- B. The provisions of this Section relating to surplus as regards policyholders shall not apply to reinsurance ceded and assumed pursuant to pooling arrangements among insurers in the same holding company system. As used in this Section, "substantially similar" standards means credit for reinsurance standards that the Director determines equal or exceed the standards of A.R.S. §§ 20-261.01 through 20-261.08 and this Article.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-1603 recodified from R4-14-1603 (Supp. 95-1). R20-6-1603 renumbered to R20-6-1608; new Section made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1604. Credit for Reinsurance – Reinsurers Maintaining Trust Funds

- A. Pursuant to A.R.S. § 20-261.05(E), the Director shall allow credit for reinsurance ceded by a domestic insurer to an assuming insurer which, as of any date on which statutory financial statement credit for reinsurance is claimed, and thereafter for so long as credit for reinsurance is claimed, maintains a trust fund in an amount prescribed below in a qualified U.S. financial institution as defined in A.R.S. § 20-261.03, for the payment of the valid claims of its U.S. domiciled ceding insurers, their assigns and successors in interest. The assuming insurer shall report annually to the Director substantially the same information as that required to be reported on the National Association of Insurance Commissioners (NAIC) annual statement form by licensed insurers, to enable the Director to determine the sufficiency of the trust fund.
- B. The following requirements apply to the following categories of assuming insurer:
 1. The trust fund for a single assuming insurer shall consist of funds in trust in an amount not less than the assuming insurer's liabilities attributable to reinsurance ceded by U.S. domiciled insurers, and in addition, the assuming insurer shall maintain a trustee surplus of not less than \$20 million, except as provided in subsection (B)(2) of this Section.
 2. At any time after the assuming insurer has permanently discontinued underwriting new business secured by the trust for at least three full years, the commissioner with principal regulatory oversight of the trust may authorize a reduction in the required trustee surplus, but only after a finding, based on an assessment of the risk, that the new required surplus level is adequate for the protection of

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- U.S. ceding insurers, policyholders and claimants in light of reasonably foreseeable adverse loss development. The risk assessment may involve an actuarial review, including an independent analysis of reserves and cash flows, and shall consider all material risk factors, including when applicable the lines of business involved, the stability of the incurred loss estimates and the effect of the surplus requirements on the assuming insurer's liquidity or solvency. The minimum required trustee surplus may not be reduced to an amount less than 30% of the assuming insurer's liabilities, attributable to reinsurance ceded by U.S. ceding insurers covered by the trust.
3. The trust fund for a group including incorporated and individual unincorporated underwriters:
 - a. Shall consist of:
 - i. For reinsurance ceded under reinsurance agreements with an inception, amendment or renewal date on or after January 1, 1993, funds in trust in an amount not less than the respective underwriters' several liabilities attributable to business ceded by U.S. domiciled ceding insurers to any underwriter of the group;
 - ii. For reinsurance ceded under reinsurance agreements with an inception date on or before December 31, 1992, and not amended or renewed after that date, notwithstanding the other provisions of this Article, funds in trust in an amount not less than the respective underwriters' several insurance and reinsurance liabilities attributable to business written in the United States; and
 - iii. In addition to these trusts, the group shall maintain a trustee surplus of which \$100 million shall be held jointly for the benefit of the U.S. domiciled ceding insurers of any member of the group for all the years of account.
 - b. The incorporated members of the group shall not be engaged in any business other than underwriting as a member of the group and shall be subject to the same level of regulation and solvency control by the group's domiciliary regulator as are the unincorporated members. The group shall, within ninety days after its financial statements are due to be filed with the group's domiciliary regulator, provide to the Director:
 - i. An annual certification by the group's domiciliary regulator of the solvency of each underwriter member of the group; or
 - ii. If a certification is unavailable, a financial statement, prepared by independent public accountants, of each underwriter member of the group.
 4. The trust fund for a group of incorporated insurers under common administration, whose members possess aggregate policyholders surplus of \$10 billion (calculated and reported in substantially the same manner as prescribed by the annual statement instructions and Accounting Practices and Procedures Manual of the NAIC) and which has continuously transacted an insurance business outside the United States for at least three years immediately prior to making application for accreditation, shall:
 - a. Consist of funds in trust in an amount no less than the assuming insurers' several liabilities attributable to business ceded by U.S. domiciled ceding insurers to any members of the group pursuant to reinsurance contracts issued in the name of such group;
 - b. Maintain a joint trustee surplus of which \$100 million shall be held jointly for the benefit of U.S. domiciled ceding insurers of any member of the group; and
 - c. File a properly executed Form AR-1 (Exhibit A) as evidence of the submission to the Director's authority to examine the books and records of any of its members and shall certify that any member examined will bear the expense of any such examination.
 - d. Within ninety days after the statements are due to be filed with the group's domiciliary regulator, the group shall file with the Director an annual certification of each underwriter member's solvency by the member's domiciliary regulators, and financial statements, prepared by independent public accountants, of each underwriter member of the group.
- C. Credit for reinsurance shall not be granted unless the form of the trust and any amendments to the trust have been approved by either the commissioner of the state where the trust is domiciled or the commissioner of another state who, pursuant to the terms of the trust instrument, has accepted responsibility for regulatory oversight of the trust. The form of the trust and any trust amendments also shall be filed with the commissioner of every state in which the ceding insurer beneficiaries of the trust are domiciled.
1. The trust instrument shall provide that:
 - a. Contested claims shall be valid and enforceable out of funds in trust to the extent remaining unsatisfied thirty days after entry of the final order of any court of competent jurisdiction in the United States;
 - b. Legal title to the assets of the trust shall be vested in the trustee for the benefit of the grantor's U.S. ceding insurers, their assigns and successors in interest;
 - c. The trust shall be subject to examination as determined by the commissioner;
 - d. The trust shall remain in effect for as long as the assuming insurer, or any member or former member of a group of insurers, shall have outstanding obligations under reinsurance agreements subject to the trust; and
 - e. No later than February 28 of each year the trustee of the trust shall report to the commissioner in writing setting forth the balance in the trust and listing the trust's investments at the preceding year-end, and shall certify the date of termination of the trust, if so planned, or certify that the trust shall not expire prior to the following December 31.
 2. Notwithstanding any other provisions in the trust instrument:
 - a. If the trust fund is inadequate because it contains an amount less than the amount required by this Section or if the grantor of the trust has been declared insolvent or placed into receivership, rehabilitation, liquidation or similar proceedings under the laws of its state or country of domicile, the trustee shall comply with an order of the commissioner with regulatory oversight over the trust or with an order of a court of competent jurisdiction directing the trustee to transfer to the commissioner with regulatory oversight over the trust or other designated receiver all of the assets of the trust fund.
 - b. The assets shall be distributed by and claims shall be filed with and valued by the commissioner with regulatory oversight over the trust in accordance with

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- the laws of the state in which the trust is domiciled applicable to the liquidation of domestic insurance companies.
- c. If the commissioner with regulatory oversight over the trust determines that the assets of the trust fund or any part thereof are not necessary to satisfy the claims of the U.S. beneficiaries of the trust, the commissioner with regulatory oversight over the trust shall return the assets, or any part thereof, to the trustee for distribution in accordance with the trust agreement.
 - d. The grantor shall waive any right otherwise available to it under U.S. law that is inconsistent with this provision.
- D.** For purposes of this Section, the term “liabilities” shall mean the assuming insurer’s gross liabilities attributable to reinsurance ceded by U.S. domiciled insurers excluding liabilities that are otherwise secured by acceptable means, and, shall include:
1. For business ceded by domestic insurers authorized to write accident and health, and property and casualty insurance:
 - a. Losses and allocated loss expenses paid by the ceding insurer, recoverable from the assuming insurer;
 - b. Reserves for losses reported and outstanding;
 - c. Reserves for losses incurred but not reported;
 - d. Reserves for allocated loss expenses; and
 - e. Unearned premiums.
 2. For business ceded by domestic insurers authorized to write life, health and annuity insurance:
 - a. Aggregate reserves for life policies and contracts net of policy loans and net due and deferred premiums;
 - b. Aggregate reserves for accident and health policies;
 - c. Deposit funds and other liabilities without life or disability contingencies; and
 - d. Liabilities for policy and contract claims.
- E.** Assets deposited in trusts established pursuant to A.R.S. § 20-261.05 and this Section shall be valued according to their current fair market value and shall consist only of cash in U.S. dollars, certificates of deposit issued by a U.S. financial institution as defined in A.R.S. § 20-261.03, clean, irrevocable, unconditional and “evergreen” letters of credit issued or confirmed by a qualified U.S. financial institution as defined in A.R.S. § 20-261.03, and investments of the type specified in this subsection (E), but investments in or issued by an entity controlling, controlled by or under common control with either the grantor or beneficiary of the trust shall not exceed 5% of total investments. No more than 20% of the total of the investments in the trust may be foreign investments authorized under subsections (E)(1)(c), (E)(3), (E)(6)(b) or (E)(7) of this Section, and no more than 10% of the total of the investments in the trust may be securities denominated in foreign currencies. For purposes of applying the preceding sentence, a depository receipt denominated in U.S. dollars and representing rights conferred by a foreign security shall be classified as a foreign investment denominated in a foreign currency. The assets of a trust established to satisfy the requirements of A.R.S. § 261.05 shall be invested only as follows:
1. Government obligations that are not in default as to principal or interest, that are valid and legally authorized and that are issued, assumed or guaranteed by:
 - a. The United States or by any agency or instrumentality of the United States;
 - b. A state of the United States;
 - c. A territory, possession or other governmental unit of the United States;
 - d. An agency or instrumentality of a governmental unit referred to in subsections (E)(1)(b) and (E)(1)(c) of this Section if the obligations shall be by law (statutory or otherwise) payable, as to both principal and interest, from taxes levied or by law required to be levied or from adequate special revenues pledged or otherwise appropriated or by law required to be provided for making these payments, but shall not be obligations eligible for investment under this subsection (E)(1)(d) if payable solely out of special assessments on properties benefited by local improvements; or
 - e. The government of any other country that is a member of the Organization for Economic Cooperation and Development and whose government obligations are rated A or higher, or the equivalent, by a rating agency recognized by the Securities Valuation Office of the NAIC;
2. Obligations that are issued in the United States, or that are dollar denominated and issued in a non-U.S. market, by a solvent U.S. institution (other than an insurance company) or that are assumed or guaranteed by a solvent U.S. institution (other than an insurance company) and that are not in default as to principal or interest if the obligations:
 - a. Are rated A or higher (or the equivalent) by a securities rating agency recognized by the Securities Valuation Office of the NAIC, or if not so rated, are similar in structure and other material respects to other obligations of the same institution that are so rated;
 - b. Are insured by at least one authorized insurer (other than the investing insurer or a parent, subsidiary or affiliate of the investing insurer) licensed to insure obligations in Arizona and, after considering the insurance, are rated AAA (or the equivalent) by a securities rating agency recognized by the Securities Valuation Office of the NAIC; or
 - c. Have been designated as Class One or Class Two by the Securities Valuation Office of the NAIC;
 3. Obligations issued, assumed or guaranteed by a solvent non-U.S. institution chartered in a country that is a member of the Organization for Economic Cooperation and Development or obligations of U.S. corporations issued in a non-U.S. currency, provided that in either case the obligations are rated A or higher, or the equivalent, by a rating agency recognized by the Securities Valuation Office of the NAIC;
 4. An investment made pursuant to the provisions of subsections (E)(1), (E)(2) or (E)(3) of this Section shall be subject to the following additional limitations:
 - a. An investment in or loan upon the obligations of an institution other than an institution that issues mortgage-related securities shall not exceed 5% of the assets of the trust;
 - b. An investment in any one mortgage-related security shall not exceed 5% of the assets of the trust;
 - c. The aggregate total investment in mortgage-related securities shall not exceed 25% of the assets of the trust; and
 - d. Preferred or guaranteed shares issued or guaranteed by a solvent U.S. institution are permissible investments if all of the institution’s obligations are eligible as investments under subsections (E)(2)(a) and (E)(2)(c) of this Section, but shall not exceed 2% of the assets of the trust.

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5. As used in this Section:
 - a. "Mortgage-related security" means an obligation that is rated AA or higher (or the equivalent) by a securities rating agency recognized by the Securities Valuation Office of the NAIC and that either:
 - i. Represents ownership of one or more promissory notes or certificates of interest or participation in the notes (including any rights designed to assure servicing of, or the receipt or timeliness of receipt by the holders of the notes, certificates, or participation of amounts payable under, the notes, certificates or participation), that: (1) Are directly secured by a first lien on a single parcel of real estate, including stock allocated to a dwelling unit in a residential cooperative housing corporation, upon which is located a dwelling or mixed residential and commercial structure, or on a residential manufactured home as defined in 42 U.S.C.A. 5402(6), whether the manufactured home is considered real or personal property under the laws of the state in which it is located; and (2) Were originated by a savings and loan association, savings bank, commercial bank, credit union, insurance company, or similar institution that is supervised and examined by a federal or state housing authority, or by a mortgagee approved by the Secretary of Housing and Urban Development pursuant to 12 U.S.C.A. 1709 and 1715-b, or, where the notes involve a lien on the manufactured home, by an institution or by a financial institution approved for insurance by the Secretary of Housing and Urban Development pursuant to 12 U.S.C.A. 1703; or
 - ii. Is secured by one or more promissory notes or certificates of deposit or participations in the notes (with or without recourse to the insurer of the notes) and, by its terms, provides for payments of principal in relation to payments, or reasonable projections of payments, or notes meeting the requirements of subsection (E)(5)(a)(i) of this Section;
 - b. "Promissory note," when used in connection with a manufactured home, shall also include a loan, advance or credit sale as evidenced by a retail installment sales contract or other instrument.
6. Equity interests.
 - a. Investments in common shares or partnership interests of a solvent U.S. institution are permissible if:
 - i. Its obligations and preferred shares, if any, are eligible as investments under this Section; and
 - ii. The equity interests of the institution (except an insurance company) are registered on a national securities exchange as provided in the Securities Exchange Act of 1934, 15 U.S.C. 78a - 78kk or otherwise registered pursuant to that Act, and if otherwise registered, price quotations for them are furnished through a nationwide automated quotations system approved by the Financial Industry Regulatory Authority, or successor organization. A trust shall not invest in equity interests under this Section an amount exceeding 1% of the assets of the trust even though the equity interests are not so registered and are not issued by an insurance company;
 - b. Investments in common shares of a solvent institution organized under the laws of a country that is a member of the Organization for Economic Cooperation and Development, if:
 - i. All its obligations are rated A or higher, or the equivalent, by a rating agency recognized by the Securities Valuation Office of the NAIC; and
 - ii. The equity interests of the institution are registered on a securities exchange regulated by the government of a country that is a member of the Organization for Economic Cooperation and Development;
 - c. An investment in or loan upon any one institution's outstanding equity interests shall not exceed 1% of the assets of the trust. The cost of an investment in equity interests made pursuant to this subsection (E)(6), when added to the aggregate cost of other investments in equity interests then held pursuant to this subsection (E)(6), shall not exceed 10% of the assets in the trust;
7. Obligations issued, assumed or guaranteed by a multinational development bank, provided the obligations are rated A or higher, or the equivalent, by a rating agency recognized by the Securities Valuation Office of the NAIC.
8. Investment companies
 - a. Securities of an investment company registered pursuant to the Investment Company Act of 1940, 15 U.S.C. 80a, are permissible investments if the investment company:
 - i. Invests at least 90% of its assets in the types of securities that qualify as an investment under subsection (E)(1), (E)(2) or (E)(3) of this Section or invests in securities that are determined by the Director to be substantively similar to the types of securities set forth in subsection (E)(1), (E)(2) or (E)(3) of this Section; or
 - ii. Invests at least 90% of its assets in the types of equity interests that qualify as an investment under subsection (E)(6)(a) of this Section;
 - b. Investments made by a trust in investment companies under this subsection (E)(8) shall not exceed the following limitations:
 - i. An investment in an investment company qualifying under subsection (E)(8)(a)(i) of this Section shall not exceed 10% of the assets in the trust and the aggregate amount of investment in qualifying investment companies shall not exceed 25% of the assets in the trust, and
 - ii. Investments in an investment company qualifying under subsection (E)(8)(a)(ii) of this Section shall not exceed 5% of the assets in the trust and the aggregate amount of investment in qualifying investment companies shall be included when calculating the permissible aggregate value of equity interests pursuant to subsection (E)(6)(a) of this Section.
9. Letters of Credit
 - a. In order for a letter of credit to qualify as an asset of the trust, the trustee shall have the right and the obligation pursuant to the deed of trust or some other binding agreement (as duly approved by the Director), to immediately draw down the full amount of the letter of credit and hold the proceeds in trust for

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- the beneficiaries of the trust if the letter of credit will otherwise expire without being renewed or replaced.
- b. The trust agreement shall provide that the trustee shall be liable for its negligence, willful misconduct or lack of good faith. The failure of the trustee to draw against the letter of credit in circumstances where such draw would be required shall be deemed to be negligence and/or willful misconduct.

- F. A specific security provided to a ceding insurer by an assuming insurer pursuant to Section R20-6-1606 shall be applied, until exhausted, to the payment of liabilities of the assuming insurer to the ceding insurer holding the specific security prior to, and as a condition precedent for, presentation of a claim by the ceding insurer for payment by a trustee of a trust established by the assuming insurer pursuant to this Section.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-1604 recodified from R4-14-1604 (Supp. 95-1). Amended effective October 9, 1998 (Supp. 98-4). R20-6-1604 renumbered to R20-6-1609; new Section made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1605. Credit for Reinsurance – Certified Reinsurers

- A. Pursuant to A.R.S. §§ 20-261.05(F), (G) and (H), the Director shall allow credit for reinsurance ceded by a domestic insurer to an assuming insurer that has been certified as a reinsurer in Arizona at all times for which statutory financial statement credit for reinsurance is claimed under this Section. The credit allowed shall be based upon the security held by or on behalf of the ceding insurer in accordance with a rating assigned to the certified reinsurer by the Director. The security shall be in a form consistent with the provisions of A.R.S. §§ 20-261.05(F), (G) and (H), 20-261.06 and Sections R20-6-1608, R20-6-1609 or R20-6-1610. The amount of security required in order for full credit to be allowed shall correspond with the following requirements:

- | | |
|--------------|-------------------|
| 1. Ratings | Security Required |
| Secure-1 | 0% |
| Secure-2 | 10% |
| Secure-3 | 20% |
| Secure-4 | 50% |
| Secure-5 | 75% |
| Vulnerable-6 | 100% |
2. Affiliated reinsurance transactions shall receive the same opportunity for reduced security requirements as all other reinsurance transactions.
3. The Director shall require the certified reinsurer to post 100%, for the benefit of the ceding insurer or its estate, security upon the entry of an order of rehabilitation, liquidation or conservation against the ceding insurer.
4. In order to facilitate the prompt payment of claims, a certified reinsurer shall not be required to post security for catastrophe recoverables for a period of one year from the date of the first instance of a liability reserve entry by the ceding company as a result of a loss from a catastrophic occurrence as recognized by the Director. The one year deferral period is contingent upon the certified reinsurer continuing to pay claims in a timely manner. Reinsurance recoverables for only the following lines of business as reported on the NAIC annual financial statement related specifically to the catastrophic occurrence will be included in the deferral:
- Line 1: Fire
 - Line 2: Allied Lines
 - Line 3: Farmowners multiple peril

- Line 4: Homeowners multiple peril
 - Line 5: Commercial multiple peril
 - Line 9: Inland Marine
 - Line 12: Earthquake
 - Line 21: Auto physical damage
5. Credit for reinsurance under this Section shall apply only to reinsurance contracts entered into or renewed on or after the effective date of the certification of the assuming insurer. Any reinsurance contract entered into prior to the effective date of the certification of the assuming insurer that is subsequently amended after the effective date of the certification of the assuming insurer, or a new reinsurance contract, covering any risk for which collateral was provided previously, shall only be subject to this Section with respect to losses incurred and reserves reported from and after the effective date of the amendment or new contract.
6. Nothing in this Section shall prohibit the parties to a reinsurance agreement from agreeing to provisions establishing security requirements that exceed the minimum security requirements established for certified reinsurers under this Section.

B. Certification Procedure

- The Director shall post notice on the insurance department's website promptly upon receipt of any application for certification, including instructions on how members of the public may respond to the application. The Director may not take final action on the application until at least thirty days after posting the notice required by this subsection (B)(1).
- The Director shall issue written notice to an assuming insurer that has made application and been approved as a certified reinsurer. Included in such notice shall be the rating assigned the certified reinsurer in accordance with subsection A of this Section. The Director shall publish a list of all certified reinsurers and their ratings.
- In order to be eligible for certification, the assuming insurer shall meet the following requirements:
 - The assuming insurer must be domiciled and licensed to transact insurance or reinsurance in a Qualified Jurisdiction, as determined by the Director pursuant to subsection C of this Section.
 - The assuming insurer must maintain capital and surplus, or its equivalent, of no less than \$250 million calculated in accordance with subsection (B)(4)(h) of this Section. This requirement may also be satisfied by an association including incorporated and individual unincorporated underwriters having minimum capital and surplus equivalents (net of liabilities) of at least \$250 million and a central fund containing a balance of at least \$250 million.
 - The assuming insurer must maintain financial strength ratings from two or more rating agencies deemed acceptable by the Director. These ratings shall be based on interactive communication between the rating agency and the assuming insurer and shall not be based solely on publicly available information. These financial strength ratings will be one factor used by the Director in determining the rating that is assigned to the assuming insurer. Acceptable rating agencies include the following:
 - Standard & Poor's;
 - Moody's Investors Service;
 - Fitch Ratings;
 - A.M. Best Company; or

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- v. Any other Nationally Recognized Statistical Rating Organization.
- d. The certified reinsurer must comply with any other requirements reasonably imposed by the Director.
- 4. Each certified reinsurer shall be rated on a legal entity basis, with due consideration being given to the group rating where appropriate, except that an association including incorporated and individual unincorporated underwriters that has been approved to do business as a single certified reinsurer may be evaluated on the basis of its group rating. Factors that may be considered as part of the evaluation process include, but are not limited to, the following:
 - a. The certified reinsurer’s financial strength rating from an acceptable rating agency. The maximum rating that a certified reinsurer may be assigned will correspond to its financial strength rating as outlined in the table below. The Director shall use the lowest financial strength rating received from an approved rating agency in establishing the maximum rating of a certified reinsurer. A failure to obtain or maintain at least two financial strength ratings from acceptable rating agencies will result in loss of eligibility for certification:

Rat-ings	Best	S&P	Moody’s	Fitch
Secure – 1	A++	AAA	Aaa	AAA
Secure – 2	A+	AA+, AA, AA-	Aa1, Aa2, Aa3	AA+, AA, AA-
Secure – 3	A	A+, A	A1, A2	A+, A
Secure – 4	A-	A-	A3	A-
Secure – 5	B++, B+	BBB+, BBB, BBB-	Baa1, Baa2, Baa3	BBB+, BBB, BBB-
Vulner-able – 6	B, B-C++, C+, C, C-, D, E, F	BB+, BB, BB-, B+, B, B-, CCC, CC, C, D, R	Ba1, Ba2, Ba3, B1, B2, B3, Caa, Ca, C	BB+, BB, BB-, B+, B, B-, CCC+, CC, CCC-, DD

- b. The business practices of the certified reinsurer in dealing with its ceding insurers, including its record of compliance with reinsurance contractual terms and obligations;
- c. For certified reinsurers domiciled in the U.S., a review of the most recent applicable NAIC Annual Statement Blank, either Schedule F (for property/casualty reinsurers) or Schedule S (for life and health reinsurers);
- d. For certified reinsurers not domiciled in the U.S., a review annually of Form CR-F (instructions attached as Exhibit C) (for property/casualty reinsurers) or Form CR-S (instructions attached as Exhibit D) (for life and health reinsurers);
- e. The reputation of the certified reinsurer for prompt payment of claims under reinsurance agreements, based on an analysis of ceding insurers’ Schedule F reporting of overdue reinsurance recoverables,

- f. Regulatory actions against the certified reinsurer;
- g. The report of the independent auditor on the financial statements of the insurance enterprise, on the basis described in subsection (B)(4)(h) below;
- h. For certified reinsurers not domiciled in the U.S., audited financial statements (audited U.S. GAAP basis if available, audited IFRS basis statements are allowed but must include an audited footnote reconciling equity and net income to a U.S. GAAP basis, or, with the permission of the Director, audited IFRS statements with reconciliation to U.S. GAAP certified by an officer of the company), regulatory filings, and actuarial opinion (as filed with the non-U.S. jurisdiction supervisor). Upon the initial application for certification, the Director will consider audited financial statements for the last three years filed with its non-U.S. jurisdiction supervisor;
- i. The liquidation priority of obligations to a ceding insurer in the certified reinsurer’s domiciliary jurisdiction in the context of an insolvency proceeding;
- j. A certified reinsurer’s participation in any solvent scheme of arrangement, or similar procedure, which involves U.S. ceding insurers. The Director shall receive prior notice from a certified reinsurer that proposes participation by the certified reinsurer in a solvent scheme of arrangement; and
- k. Any other information deemed relevant by the Director.
- 5. Based on the analysis conducted under subsection (B)(4)(e) of this Section of a certified reinsurer’s reputation for prompt payment of claims, the Director may make appropriate adjustments in the security the certified reinsurer is required to post to protect its liabilities to U.S. ceding insurers, provided that the Director shall, at a minimum, increase the security the certified reinsurer is required to post by one rating level under subsection (B)(4)(a) of this Section if the Director finds that:
 - a. more than 15% of the certified reinsurer’s ceding insurance clients have overdue reinsurance recoverables on paid losses of ninety days or more which are not in dispute and which exceed \$100 thousand for each cedent; or
 - b. the aggregate amount of reinsurance recoverables on paid losses which are not in dispute that are overdue by ninety days or more exceeds \$50 million.
- 6. The assuming insurer must submit a properly executed Form CR-1 (attached as Exhibit B) as evidence of its submission to the jurisdiction of Arizona, appointment of the Director as an agent for service of process in Arizona, and agreement to provide security for 100% of the assuming insurer’s liabilities attributable to reinsurance ceded by U.S. ceding insurers if it resists enforcement of a final U.S. judgment. The Director shall not certify any assuming insurer that is domiciled in a jurisdiction that the Director has determined does not adequately and promptly enforce final U.S. judgments or arbitration awards.
- 7. The certified reinsurer must agree to meet applicable information filing requirements as determined by the Director, both with respect to an initial application for certification and on an ongoing basis. All information

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submitted by certified reinsurers which are not otherwise public information subject to disclosure shall be exempted from disclosure under A.R.S. § 20-158 and shall be withheld from public disclosure. The applicable information filing requirements are, as follows:

- a. Notification within ten days of any regulatory actions taken against the certified reinsurer, any change in the provisions of its domiciliary license or any change in rating by an approved rating agency, including a statement describing such changes and the reasons therefore;
 - b. Annually, Form CR-F or CR-S, as applicable;
 - c. Annually, the report of the independent auditor on the financial statements of the insurance enterprise, on the basis described in subsection (B)(7)(d) below;
 - d. Annually, audited financial statements (audited U.S. GAAP basis if available, audited IFRS basis statements are allowed but must include an audited footnote reconciling equity and net income to a U.S. GAAP basis, or, with the permission of the Director, audited IFRS statements with reconciliation to U.S. GAAP certified by an officer of the company), regulatory filings, and actuarial opinion (as filed with the certified reinsurer's supervisor). Upon the initial certification, audited financial statements for the last three years filed with the certified reinsurer's supervisor;
 - e. At least annually, an updated list of all disputed and overdue reinsurance claims regarding reinsurance assumed from U.S. domestic ceding insurers;
 - f. A certification from the certified reinsurer's domestic regulator that the certified reinsurer is in good standing and maintains capital in excess of the jurisdiction's highest regulatory action level; and
 - g. Any other information that the Director may reasonably require.
8. Change in Rating or Revocation of Certification.
- a. In the case of a downgrade by a rating agency or other disqualifying circumstance, the Director shall upon written notice assign a new rating to the certified reinsurer in accordance with the requirements of subsection (B)(4)(a) of this Section.
 - b. The Director shall have the authority to suspend, revoke, or otherwise modify a certified reinsurer's certification at any time if the certified reinsurer fails to meet its obligations or security requirements under this Section, or if other financial or operating results of the certified reinsurer, or documented significant delays in payment by the certified reinsurer, lead the Director to reconsider the certified reinsurer's ability or willingness to meet its contractual obligations.
 - c. If the rating of a certified reinsurer is upgraded by the Director, the certified reinsurer may meet the security requirements applicable to its new rating on a prospective basis, but the Director shall require the certified reinsurer to post security under the previously applicable security requirements as to all contracts in force on or before the effective date of the upgraded rating. If the rating of a certified reinsurer is downgraded by the Director, the Director shall require the certified reinsurer to meet the security requirements applicable to its new rating for all business it has assumed as a certified reinsurer.
 - d. Upon revocation of the certification of a certified reinsurer by the Director, the assuming insurer shall be required to post security in accordance with Section R20-6-1607 in order for the ceding insurer to continue to take credit for reinsurance ceded to the assuming insurer. If funds continue to be held in trust in accordance with Section R20-6-1604, the Director may allow additional credit equal to the ceding insurer's pro rata share of such funds, discounted to reflect the risk of uncollectibility and anticipated expenses of trust administration. Notwithstanding the change of a certified reinsurer's rating or revocation of its certification, a domestic insurer that has ceded reinsurance to that certified reinsurer may not be denied credit for reinsurance for a period of three months for all reinsurance ceded to that certified reinsurer, unless the reinsurance is found by the Director to be at high risk of uncollectibility.
- C. Qualified Jurisdictions.
1. If, upon conducting an evaluation under this Section with respect to the reinsurance supervisory system of any non-U.S. assuming insurer, the Director determines that the jurisdiction qualifies to be recognized as a qualified jurisdiction, the Director shall publish notice and evidence of such recognition in an appropriate manner. The Director may establish a procedure to withdraw recognition of those jurisdictions that are no longer qualified.
 2. In order to determine whether the domiciliary jurisdiction of a non-U.S. assuming insurer is eligible to be recognized as a qualified jurisdiction, the Director shall evaluate the reinsurance supervisory system of the non-U.S. jurisdiction, both initially and on an ongoing basis, and consider the rights, benefits and the extent of reciprocal recognition afforded by the non-U.S. jurisdiction to reinsurers licensed and domiciled in the U.S. The Director shall determine the appropriate approach for evaluating the qualifications of such jurisdictions, and create and publish a list of jurisdictions whose reinsurers may be approved by the Director as eligible for certification. A qualified jurisdiction must agree to share information and cooperate with the Director with respect to all certified reinsurers domiciled within that jurisdiction. Additional factors to be considered in determining whether to recognize a qualified jurisdiction, in the discretion of the Director, include but are not limited to the following:
 - a. The framework under which the assuming insurer is regulated.
 - b. The structure and authority of the domiciliary regulator with regard to solvency regulation requirements and financial surveillance.
 - c. The substance of financial and operating standards for assuming insurers in the domiciliary jurisdiction.
 - d. The form and substance of financial reports required to be filed or made publicly available by reinsurers in the domiciliary jurisdiction and the accounting principles used.
 - e. The domiciliary regulator's willingness to cooperate with U.S. regulators in general and the Director in particular.
 - f. The history of performance by assuming insurers in the domiciliary jurisdiction.
 - g. Any documented evidence of substantial problems with the enforcement of final U.S. judgments in the domiciliary jurisdiction. A jurisdiction will not be considered to be a qualified jurisdiction if the Director has determined that it does not adequately and

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promptly enforce final U.S. judgments or arbitration awards.

- h. Any relevant international standards or guidance with respect to mutual recognition of reinsurance supervision adopted by the International Association of Insurance Supervisors or successor organization.
 - i. Any other matters deemed relevant by the Director.
3. A list of qualified jurisdictions shall be published through the NAIC Committee Process. The Director shall consider this list in determining qualified jurisdictions. If the Director approves a jurisdiction as qualified that does not appear on the list of qualified jurisdictions, the Director shall provide thoroughly documented justification with respect to the criteria provided under subsections (C)(2)(a) through (i) of this Section.
 4. U.S. jurisdictions that meet the requirements for accreditation under the NAIC financial standards and accreditation program shall be recognized as qualified jurisdictions.
- D. Recognition of Certification Issued by an NAIC Accredited Jurisdiction.**
1. If an applicant for certification has been certified as a reinsurer in an NAIC accredited jurisdiction, the Director has the discretion to defer to that jurisdiction's certification, and to defer to the rating assigned by that jurisdiction, if the assuming insurer submits a properly executed Form CR-1 (Exhibit B) and such additional information as the Director requires. The assuming insurer shall be considered to be a certified reinsurer in Arizona.
 2. Any change in the certified reinsurer's status or rating in the other jurisdiction shall apply automatically in Arizona as of the date it takes effect in the other jurisdiction. The certified reinsurer shall notify the Director of any change in its status or rating within ten days after receiving notice of the change.
 3. The Director may withdraw recognition of the other jurisdiction's rating at any time and assign a new rating in accordance with subsection (B)(8) of this Section.
 4. The Director may withdraw recognition of the other jurisdiction's certification at any time, with written notice to the certified reinsurer. Unless the Director suspends or revokes the certified reinsurer's certification in accordance with subsection (B)(8) of this Section, the certified reinsurer's certification shall remain in good standing in this State for a period of three months, which shall be extended if additional time is necessary to consider the assuming insurer's application for certification in Arizona.
- E. Mandatory Funding Clause.** In addition to the clauses required under Section R20-6-1611, reinsurance contracts entered into or renewed under this Section shall include a proper funding clause, which requires the certified reinsurer to provide and maintain security in an amount sufficient to avoid the imposition of any financial statement penalty on the ceding insurer under this Section for reinsurance ceded to the certified reinsurer.
- F.** The Director shall comply with all reporting and notification requirements that may be established by the NAIC with respect to certified reinsurers and qualified jurisdictions.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-1605 recodified from R4-14-1605 (Supp. 95-1). R20-6-1605 renumbered to R20-6-1610; new Section made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3,

effective November 30, 2015 (Supp. 15-4).

R20-6-1606. Credit for Reinsurance Required by Law

Pursuant to A.R.S. § 20-261.05(I), the Director shall allow credit for reinsurance ceded by a domestic insurer to an assuming insurer not meeting the requirements of A.R.S. §§ 20-261.05(B) through (H) but only as to the insurance of risks located in jurisdictions where the reinsurance is required by the applicable law or regulation of that jurisdiction. As used in this Section, "jurisdiction" means state, district or territory of the United States and any lawful national government.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-1606 recodified from R4-14-1606 (Supp. 95-1). R20-6-1606 renumbered to R20-6-1611; new Section made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1607. Asset or Reduction from Liability for Reinsurance Ceded to an Unauthorized Assuming Insurer not Meeting the Requirements of Sections R20-6-1601 through R20-6-1606

- A.** Pursuant to A.R.S. § 20-261.06, the Director shall allow a reduction from liability for reinsurance ceded by a domestic insurer to an assuming insurer not meeting the requirements of A.R.S. § 20-261.05 in an amount not exceeding the liabilities carried by the ceding insurer. The reduction shall be in the amount of funds held by or on behalf of the ceding insurer, including funds held in trust for the exclusive benefit of the ceding insurer, under a reinsurance contract with such assuming insurer as security for the payment of obligations under the reinsurance contract. The security shall be held in the United States subject to withdrawal solely by, and under the exclusive control of, the ceding insurer or, in the case of a trust, held in a qualified United States financial institution as defined in A.R.S. § 20-261.03. This security may be in the form of any of the following:
1. Cash;
 2. Securities listed by the Securities Valuation Office of the NAIC, including those deemed exempt from filing as defined by the Purposes and Procedures Manual of the Securities Valuation Office, and qualifying as admitted assets;
 3. Clean, irrevocable, unconditional and "evergreen" letters of credit issued or confirmed by a qualified United States institution, as defined in A.R.S. § 20-261.03, effective no later than December 31 of the year for which filing is being made, and in the possession of, or in trust for, the ceding insurer on or before the filing date of its annual statement. Letters of credit meeting applicable standards of issuer acceptability as of the dates of their issuance (or confirmation) shall, notwithstanding the issuing (or confirming) institution's subsequent failure to meet applicable standards of issuer acceptability, continue to be acceptable as security until their expiration, extension, renewal, modification or amendment, whichever first occurs; or
 4. Any other form of security acceptable to the Director.
- B.** An admitted asset or a reduction from liability for reinsurance ceded to an unauthorized assuming insurer pursuant to this Section shall be allowed only when the requirements of Section R20-6-1611 and the applicable portions of Sections R20-6-1608, R20-6-1609 or R20-6-1610 have been satisfied.

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). R20-6-1607 recodified from R4-14-1607 (Supp. 95-1). Section R20-6-1607 renumbered to R20-6-1612; new Section R20-6-1607 renumbered from R20-6-1602 and amended

by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1608. Trust Agreements Qualified under Section R20-6-1607

A. As used in this Section:

1. "Beneficiary" includes any successor by operation of law of the named beneficiary, including without limitation any liquidator, rehabilitator, receiver or conservator.
2. "Grantor" means the entity that has established a trust for the sole benefit of the beneficiary. When established in conjunction with a reinsurance agreement, the grantor is the unlicensed, unaccredited assuming insurer.
3. "Obligations," as used in subsection (B)(11) of this Section, means:
 - a. Reinsured losses and allocated loss expenses paid by the ceding company but not recovered from the assuming insurer;
 - b. Reserves for reinsured losses reported and outstanding;
 - c. Reserves for reinsured losses incurred but not reported; and
 - d. Reserves for allocated reinsured loss expenses and unearned premiums.

B. Required conditions.

1. The trust agreement shall be entered into between the beneficiary, the grantor and a trustee, which shall be a qualified United States financial institution as defined in A.R.S. § 20-261.03.
2. The trust agreement shall create a trust account into which assets shall be deposited.
3. All assets in the trust account shall be held by the trustee at the trustee's office in the United States.
4. The trust agreement shall provide that:
 - a. The beneficiary shall have the right to withdraw assets from the trust account at any time, without notice to the grantor, subject only to written notice from the beneficiary to the trustee;
 - b. No other statement or document is required to be presented in order to withdraw assets, except that the beneficiary may be required to acknowledge receipt of withdrawn assets;
 - c. It is not subject to any conditions or qualifications outside of the trust agreement; and
 - d. It shall not contain references to any other agreements or documents except as provided for in subsections (B)(11) and (12) of this Section.
5. The trust agreement shall be established for the sole benefit of the beneficiary.
6. The trust agreement shall require the trustee to:
 - a. Receive assets and hold all assets in a safe place;
 - b. Determine that all assets are in such form that the beneficiary, or the trustee upon direction by the beneficiary, may whenever necessary negotiate any such assets, without consent or signature from the grantor or any other person or entity;
 - c. Furnish to the grantor and the beneficiary a statement of all assets in the trust account upon its inception and at intervals no less frequent than the end of each calendar quarter;
 - d. Notify the grantor and the beneficiary within ten days, of any deposits to or withdrawals from the trust account;
 - e. Upon written demand of the beneficiary, immediately take any and all steps necessary to transfer absolutely and unequivocally all right, title and interest in the assets held in the trust account to the

beneficiary and deliver physical custody of the assets to the beneficiary; and

- f. Allow no substitutions or withdrawals of assets from the trust account, except on written instructions from the beneficiary, except that the trustee may, without the consent of but with notice to the beneficiary, upon call or maturity of any trust asset, withdraw such asset upon condition that the proceeds are paid into the trust account.
7. The trust agreement shall provide that at least thirty days, but not more than forty-five days, prior to termination of the trust account, written notification of termination shall be delivered by the trustee to the beneficiary.
8. The trust agreement shall be made subject to and governed by the laws of the state in which the trust is domiciled.
9. The trust agreement shall prohibit invasion of the trust corpus for the purpose of paying commission to, or reimbursing the expenses of, the trustee. In order for a letter of credit to qualify as an asset of the trust, the trustee shall have the right and the obligation pursuant to the deed of trust or some other binding agreement (as duly approved by the Director), to immediately draw down the full amount of the letter of credit and hold the proceeds in trust for the beneficiaries of the trust if the letter of credit will otherwise expire without being renewed or replaced.
10. The trust agreement shall provide that the trustee shall be liable for its negligence, willful misconduct or lack of good faith. The failure of the trustee to draw against the letter of credit in circumstances where such draw would be required shall be deemed to be negligence and/or willful misconduct.
11. Notwithstanding other provisions of this Section, when a trust agreement is established in conjunction with a reinsurance agreement covering risks other than life, annuities and accident and health, where it is customary practice to provide a trust agreement for a specific purpose, the trust agreement may provide that the ceding insurer shall undertake to use and apply amounts drawn upon the trust account, without diminution because of the insolvency of the ceding insurer or the assuming insurer, only for the following purposes:
 - a. To pay or reimburse the ceding insurer for the assuming insurer's share under the specific reinsurance agreement regarding any losses and allocated loss expenses paid by the ceding insurer, but not recovered from the assuming insurer, or for unearned premiums due to the ceding insurer if not otherwise paid by the assuming insurer;
 - b. To make payment to the assuming insurer of any amounts held in the trust account that exceed 102% of the actual amount required to fund the assuming insurer's obligations under the specific reinsurance agreement; or
 - c. Where the ceding insurer has received notification of termination of the trust account and where the assuming insurer's entire obligations under the specific reinsurance agreement remain unliquidated and undischarged ten days prior to the termination date, to withdraw amounts equal to the obligations and deposit those amounts in a separate account, in the name of the ceding insurer in any qualified United States financial institution as defined in A.R.S. § 20-261.03 apart from its general assets, in trust for such uses and purposes specified in subsections (11)(a) and (b) above as may remain executory after such

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withdrawal and for any period after the termination date.

12. Notwithstanding other provisions of this Section, when a trust agreement is established to meet the requirements of Section R20-6-1607 in conjunction with a reinsurance agreement covering life, annuities or accident and health risks, where it is customary to provide a trust agreement for a specific purpose, the trust agreement may provide that the ceding insurer shall undertake to use and apply amounts drawn upon the trust account, without diminution because of the insolvency of the ceding insurer or the assuming insurer, only for the following purposes:

- a. To pay or reimburse the ceding insurer for:
 - i. The assuming insurer's share under the specific reinsurance agreement of premiums returned, but not yet recovered from the assuming insurer, to the owners of policies reinsured under the reinsurance agreement on account of cancellations of the policies; and
 - ii. The assuming insurer's share under the specific reinsurance agreement of surrenders and benefits or losses paid by the ceding insurer, but not yet recovered from the assuming insurer, under the terms and provision of the policies reinsured under the reinsurance agreement.
- b. To pay to the assuming insurer amounts held in the trust account in excess of the amount necessary to secure the credit or reduction from liability for reinsurance taken by the ceding insurer, or
- c. Where the ceding insurer has received notification of termination of the trust and where the assuming insurer's entire obligations under the specific reinsurance agreement remain unliquidated and undischarged ten days prior to the termination date, to withdraw amounts equal to the assuming insurer's share of liabilities, to the extent that the liabilities have not yet been funded by the assuming insurer, and deposit those amounts in a separate account, in the name of the ceding insurer in any qualified U.S. financial institution apart from its general assets, in trust for the uses and purposes specified in subsections (12)(a) and (b) above as may remain executory after withdrawal and for any period after the termination date.

13. Either the reinsurance agreement or the trust agreement must stipulate that assets deposited in the trust account shall be valued according to their current fair market value and shall consist only of cash in United States dollars, certificates of deposit issued by a United States bank and payable in United States dollars, and investments permitted by the Insurance Code or any combination of the above, provided investments in or issued by an entity controlling, controlled by or under common control with either the grantor or the beneficiary of the trust shall not exceed 5% of total investments. The agreement may further specify the types of investments to be deposited. If the reinsurance agreement covers life, annuities or accident and health risks, then the provisions required by this subsection must be included in the reinsurance agreement.

C. Permitted conditions

1. The trust agreement may provide that the trustee may resign upon delivery of a written notice of resignation, effective not less than ninety days after the beneficiary and grantor receive the notice and that the trustee may be removed by the grantor by delivery to the trustee and the

beneficiary of a written notice of removal, effective not less than ninety days after the trustee and the beneficiary receive the notice, provided that no such resignation or removal shall be effective until a successor trustee has been duly appointed and approved by the beneficiary and the grantor and all assets in the trust have been duly transferred to the new trustee.

2. The grantor may have the full and unqualified right to vote any shares of stock in the trust account and to receive from time to time payments of any dividends or interest upon any shares of stock or obligations included in the trust account. Any interest or dividends shall be either forwarded promptly upon receipt to the grantor or deposited in a separate account established in the grantor's name.
 3. The trustee may be given authority to invest, and accept substitutions of, any funds in the account, provided that no investment or substitution shall be made without prior approval of the beneficiary, unless the trust agreement specifies categories of investments acceptable to the beneficiary and authorizes the trustee to invest funds and to accept substitutions that the trustee determines are at least equal in current fair market value to the assets withdrawn and that are consistent with the restrictions in subsection (D)(1)(b) of this Section.
 4. The trust agreement may provide that the beneficiary may at any time designate a party to which all or part of the trust assets are to be transferred. Transfer may be conditioned upon the trustee receiving, prior to or simultaneously, other specified assets.
 5. The trust agreement may provide that, upon termination of the trust account, all assets not previously withdrawn by the beneficiary shall, with written approval by the beneficiary, be delivered over to the grantor.
- D. Additional conditions applicable to reinsurance agreements:**
1. A reinsurance agreement may contain provisions that:
 - a. Require the assuming insurer to enter into a trust agreement and to establish a trust account for the benefit of the ceding insurer, and specifying what the agreement is to cover;
 - b. Require the assuming insurer, prior to depositing assets with the trustee, to execute assignments or endorsements in blank, or to transfer legal title to the trustee of all shares, obligations or any other assets requiring assignments, in order that the ceding insurer, or the trustee upon the direction of the ceding insurer, may whenever necessary negotiate these assets without consent or signature from the assuming insurer or any other entity;
 - c. Require that all settlements of account between the ceding insurer and the assuming insurer be made in cash or its equivalent; and
 - d. Stipulate that the assuming insurer and the ceding insurer agree that the assets in the trust account, established pursuant to the provisions of the reinsurance agreement, may be withdrawn by the ceding insurer at any time, notwithstanding any other provisions in the reinsurance agreement, and shall be utilized and applied by the ceding insurer or its successors in interest by operation of law, including without limitation any liquidator, rehabilitator, receiver or conservator of such company, without diminution because of insolvency on the part of the ceding insurer or the assuming insurer, only for the following purposes:

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- i. To pay or reimburse the ceding insurer for the assuming insurer's share under the specific reinsurance agreement of premiums returned, but not yet recovered from the assuming insurer, to the owners of policies reinsured under the reinsurance agreement because of cancellations of such policies; and
 - ii. To pay or reimburse the ceding insurer for the assuming insurer's share of surrenders and benefits or losses paid by the ceding insurer pursuant to the provisions of the policies reinsured under the reinsurance agreement; and
 - iii. To pay or reimburse the ceding insurer for any other amounts necessary to secure the credit or reduction from liability for reinsurance taken by the ceding reinsurer; or
 - iv. To make payment to the assuming insurer of amounts held in the trust account in excess of the amount necessary to secure the credit or reduction from liability for reinsurance taken by the ceding insurer.
2. The reinsurance agreement also may contain provisions that:
 - a. Give the assuming insurer the right to seek approval from the ceding insurer, which shall not be unreasonably or arbitrarily withheld, to withdraw from the trust account all or any part of the trust assets and transfer those assets to the assuming insurer, provided:
 - i. The assuming insurer shall, at the time of withdrawal, replace the withdrawn assets with other qualified assets having a current fair market value equal to the market value of the assets withdrawn so as to maintain at all times the deposit in the required amount, or
 - ii. After withdrawal and transfer, the current fair market value of the trust account is no less than 102% of the required amount.
 - b. Provide for the return of any amount withdrawn in excess of the actual amounts required for subsection (D)(1)(d) of this Section, and for interest payments at a rate not in excess of the prime rate of interest on such amounts;
 - c. Permit the award by any arbitration panel or court of competent jurisdiction of:
 - i. Interest at a rate different from that provided in subsection (D)(2)(b) of this Section;
 - ii. Court or arbitration costs;
 - iii. Attorney's fees; and
 - iv. Any other reasonable expenses.
- E. Financial reporting. A trust agreement may be used to reduce any liability for reinsurance ceded to an unauthorized assuming insurer in financial statements required to be filed with the Director in compliance with the provisions of this Article when established on or before the date of filing of the financial statement of the ceding insurer. Further, the reduction for the existence of an acceptable trust account may be up to the current fair market value of acceptable assets available to be withdrawn from the trust account at that time, but such reduction shall be no greater than the specific obligations under the reinsurance agreement that the trust account was established to secure.
 - F. Existing agreements. Notwithstanding the effective date of this Article, any trust agreement or underlying reinsurance agreement in existence and approved by the Director prior to the effective date of this Article will continue to be acceptable until December 31, 2016, at which time the agreements will have to fully comply with this Section for the trust agreement to be acceptable.
 - G. The failure of any trust agreement to specifically identify the beneficiary as defined in subsection (A)(1) of this Section shall not be construed to affect any actions or rights that the Director may take or possess pursuant to the provisions of the laws of Arizona.

Historical Note

New Section R20-6-1608 renumbered from R20-6-1603 and amended by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1609. Letters of Credit Qualified under Section R20-6-1607.

- A. The letter of credit must be clean, irrevocable, unconditional and issued or confirmed by a qualified United States financial institution as defined A.R.S. § 20-261.03. The letter of credit shall contain an issue date and expiration date and shall stipulate that the beneficiary need only draw a sight draft under the letter of credit and present it to obtain funds and that no other document need be presented. The letter of credit also shall indicate that it is not subject to any condition or qualifications outside of the letter of credit. In addition, the letter of credit itself shall not contain reference to any other agreements, documents or entities, except as provided in subsection (H)(1) of this Section. As used in this Section, "beneficiary" includes any successor by operation of law of the named beneficiary, including without limitation any liquidator, rehabilitator, receiver or conservator. If a court of law appoints a successor in interest to the named beneficiary, then the named beneficiary includes and is limited to the court appointed domiciliary receiver (including conservator, rehabilitator or liquidator).
- B. The heading of the letter of credit may include a boxed section containing the name of the applicant and other appropriate notations to provide a reference for the letter of credit. The boxed section shall be clearly marked to indicate that such information is for internal identification purposes only.
- C. A letter of credit shall contain a statement to the effect that the obligation of the qualified United States financial institution under the letter of credit is in no way contingent upon reimbursement with respect thereto.
- D. The term of the letter of credit shall be for at least one year and shall contain an "evergreen clause" that prevents the expiration of the letter of credit without due notice from the issuer. The "evergreen clause" shall provide for no less than thirty days' notice prior to expiration date or nonrenewal.
- E. The letter of credit shall state whether it is subject to and governed by the laws of Arizona or the Uniform Customs and Practice for Documentary Credits of the International Chamber of Commerce Publication 600 (UCP 600) or International Standby Practices of the International Chamber of Commerce Publication 590 (ISP98). This incorporation by reference contains no future additions or amendments. All drafts of letters of credit drawn according to UCP 600 or ISP98 shall be presentable at an office in the United States of a qualified United States financial institution.
- F. If the letter of credit is made subject to the Uniform Customs and Practice for Documentary Credits of the International Chamber of Commerce Publication 600 (UCP 600) or International Standby Practices of the International Chamber of Commerce Publication 590 (ISP98), then the letter of credit shall specifically address and provide for an extension of time to draw against the letter of credit in the event that one or more of the occurrences specified in Article 36 of UCP 600 occur.

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- G.** If the letter of credit is issued by a financial institution authorized to issue letters of credit, other than a qualified United States financial institution as described in subsection A of this Section, then the following additional requirements shall be met:
1. The issuing financial institution shall formally designate the confirming qualified United States financial institution as its agent for the receipt and payment of the drafts; and
 2. The “evergreen clause” shall provide for thirty days notice prior to expiration date or nonrenewal.
- H.** Reinsurance agreement provisions.
1. The reinsurance agreement in conjunction with which the letter of credit is obtained may contain provisions that:
 - a. Require the assuming insurer to provide letters of credit to the ceding insurer and specify what they are to cover;
 - b. Stipulate that the assuming insurer and ceding insurer agree that the letter of credit provided by the assuming insurer pursuant to the provisions of the reinsurance agreement may be drawn upon at any time, notwithstanding any other provisions in the agreement, and shall be utilized by the ceding insurer or its successors in interest only for one or more of the following reasons:
 - i. To pay or reimburse the ceding insurer for the assuming insurer’s share under the specific reinsurance agreement of premiums returned, but not yet recovered from the assuming insurers, to the owners of policies reinsured under the reinsurance agreement on account of cancellations of such policies;
 - ii. To pay or reimburse the ceding insurer for the assuming insurer’s share, under the specific reinsurance agreement, of surrenders and benefits or losses paid by the ceding insurer, but not yet recovered from the assuming insurers, under the terms and provisions of the policies reinsured under the reinsurance agreement; and
 - iii. To pay or reimburse the ceding insurer for any other amounts necessary to secure the credit or reduction from liability for reinsurance taken by the ceding insurer;
 - iv. Where the letter of credit will expire without renewal or be reduced or replaced by a letter of credit for a reduced amount and where the assuming insurer’s entire obligations under the reinsurance agreement remain unliquidated and undischarged ten days prior to the termination date, to withdraw amounts equal to the assuming insurer’s share of the liabilities, to the extent that the liabilities have not yet been funded by the assuming insurer and exceed the amount of any reduced or replacement letter of credit, and deposit those amounts in a separate account in the name of the ceding insurer in a qualified U.S. financial institution apart from its general assets, in trust for such uses and purposes specified in subsections (H)(1)(b)(i), (ii) and (iii) of this Section as may remain after withdrawal and for any period after the termination date.
 - c. All of the provisions of subsections (H)(1)(a) and (b) of this Section shall be applied without diminution because of insolvency on the part of the ceding insurer or assuming insurer.
 2. Nothing contained in subsection (H)(1) of this Section shall preclude the ceding insurer and assuming insurer from providing for:
 - a. An interest payment, at a rate not in excess of the prime rate of interest on the amounts held pursuant to subsection (H)(1)(b) of this Section; or
 - b. The return of any amounts drawn down on the letters of credit in excess of the actual amounts required for the above or any amounts that are subsequently determined not to be due.

Historical Note

New Section R20-6-1609 renumbered from R20-6-1604 and amended by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1610. Other Security

A ceding insurer may take credit for unencumbered funds withheld by the ceding insurer in the United States subject to withdrawal solely by the ceding insurer and under its exclusive control.

Historical Note

New Section R20-6-1610 renumbered from R20-6-1605 by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-1611. Reinsurance Contract

Credit will not be granted, nor an asset or reduction from liability allowed, to a ceding insurer for reinsurance effected with assuming insurers meeting the requirements of Sections R20-6-1601 through R20-6-1605 or R20-6-1607 of this Article or otherwise in compliance with A.R.S. § 20-261.05 after the adoption of this Article unless the reinsurance agreement:

1. Includes a proper insolvency clause, which stipulates that reinsurance is payable directly to the liquidator or successor without diminution regardless of the status of the ceding company, pursuant to A.R.S. § 20-261(C);
2. Includes a provision pursuant to A.R.S. § 20-261.05 whereby the assuming insurer, if an unauthorized assuming insurer, has submitted to the jurisdiction of an alternative dispute resolution panel or court of competent jurisdiction within the United States, has agreed to comply with all requirements necessary to give the court or panel jurisdiction, has designated an agent upon whom service of process may be effected, and has agreed to abide by the final decision of the court or panel; and
3. Includes a proper reinsurance intermediary clause, if applicable, which stipulates that the credit risk for the intermediary is carried by the assuming insurer.

Historical Note

New Section R20-6-1611 renumbered from R20-6-1606 and amended by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

R20-6-6012. Contracts Affected

All new and renewal reinsurance transactions entered into after the effective date of this Article shall conform to the requirements of A.R.S. §§ 20-261.01 through 20-261.08 and this Article if credit is to be given to the ceding insurer for such reinsurance.

Historical Note

New Section R20-6-1612 renumbered from R20-6-1607 and amended by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

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Exhibit B. Form CR-1, Certificate of Certified Reinsurer

FORM CR-1, CERTIFICATE OF CERTIFIED REINSURER

I, _____, _____,
(name of officer) (title of officer)

of _____, the assuming insurer under
(name of assuming insurer)

a reinsurance agreement with one or more insurers domiciled in _____
(name of state)

in order to be considered for approval in this state, hereby certify that
_____ ("Assuming Insurer"):
(name of assuming insurer)

1. Submits to the jurisdiction of any court of competent jurisdiction in _____ for the adjudication of any issue arising out of the (ceding insurer's state of domicile) reinsurance agreement, agrees to comply with all requirements necessary to give such court jurisdiction, and will abide by the final decision of such court or any appellate court in the event of an appeal. Nothing in this paragraph constitutes or should be understood to constitute a waiver of Assuming Insurer's rights to commence an action in any court of competent jurisdiction in the United States, to remove an action to a United States District Court, or to seek a transfer of a case to another court as permitted by the laws of the United States or of any state in the United States. This paragraph is not intended to conflict with or override the obligation of the parties to the reinsurance agreement to arbitrate their disputes if such an obligation is created in the agreement.

2. Designates the Insurance Commissioner of _____ (ceding insurer's state of domicile) as its lawful attorney upon whom may be served any lawful process in any action, suit or proceeding arising out of the reinsurance agreement instituted by or on behalf of the ceding insurer.

3. Agrees to provide security in an amount equal to 100% of liabilities attributable to U.S. ceding insurers if it resists enforcement of a final U.S. judgment or properly enforceable arbitration award.

4. Agrees to provide notification within 10 days of any regulatory actions taken against it, any change in the provisions of its domiciliary license or any change in its rating by an approved rating agency, including a statement describing such changes and the reasons therefore.

5. Agrees to annually file information comparable to relevant provisions of the NAIC financial statement for use by insurance markets in accordance with this Article.

6. Agrees to annually file the report of the independent auditor on the financial statements of the insurance enterprise.

7. Agrees to annually file audited financial statements, regulatory filings, and actuarial opinion in accordance with this Article.

8. Agrees to annually file an updated list of all disputed and overdue reinsurance claims regarding reinsurance assumed from U.S. domestic ceding insurers.

9. Is in good standing as an insurer or reinsurer with the supervisor of its domiciliary jurisdiction.

Dated: _____ (name of assuming insurer)

_____ (name of officer)

_____ (title of officer)

Historical Note

Adopted effective February 3, 1993 (Supp. 93-1). Exhibit B repealed; new Exhibit B made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

Exhibit C. Form CR-F Instructions**Form CR-F Instructions****Part 1 - Assumed Reinsurance as of December 31, Current Year (000 Omitted)**

Create a spreadsheet with the following columns (total each column 5 through 15):

1. ID Number/Company Code
2. This column is intentionally left blank
3. Name of Reinsured
4. Domiciliary Jurisdiction
5. Assumed Premium
6. Reinsurance on Paid Losses and Loss Adjustment Expenses
7. Reinsurance on Known Case Losses and LAE
8. Cols. 6 + 7
9. Contingent Commissions Payable
10. Assumed Premium Receivable
11. Unearned Premium
12. Funds Held By or Deposited With Reinsured Companies
13. Letters of Credit Posted
14. Amount of Assets Pledged or Compensating Balances to Secure Letters of Credit
15. Amount of Assets Pledged or Collateral Held in Trust

Each row shall list each insurer for which reinsurance is assumed for the calendar year.

Part 2 - Ceded Reinsurance as of December 31, Current Year (000 Omitted)

Create a spreadsheet with the following columns (total each column 6 through 19):

1. ID Number/Company Code
2. This column is intentionally left blank
3. Name of Reinsurer
4. Domiciliary Jurisdiction
5. Reinsurance Contracts Ceding 75% or More of Direct Premiums Written
6. Reinsurance Premiums Ceded
7. Reinsurance Recoverable on Paid Losses
8. Reinsurance Recoverable on Paid LAE
9. Reinsurance Recoverable on Known Case Loss Reserves
10. Reinsurance Recoverable on Known Case LAE Reserves
11. Reinsurance Recoverable on IBNR Loss Reserves
12. Reinsurance Recoverable on IBNR LAE Reserves
13. Reinsurance Recoverable on Unearned Premiums
14. Reinsurance Recoverable on Contingent Commissions
15. Cols. 7 through 14 Totals
16. Reinsurance Payable Ceded Balances Payable
17. Reinsurance Payable Other Amounts Due to Reinsurers
18. Net Amount Recoverable From Reinsurers, Cols. 15 – [16 + 17]
19. Funds Held by Company Under Reinsurance Treaties

Each row shall list each insurer to whom reinsurance was ceded for the calendar year.

Historical Note

Exhibit C made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

Exhibit D. Form CR-S Instructions**Form CR-S Instructions**

Part 1 – Section 1. Reinsurance Assumed Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsured Company as of December 31, Current Year

Create a spreadsheet with the following columns (total each column 7 through 12):

1. ID Number/Company Code
2. This column is intentionally left blank
3. Effective Date
4. Name of Reinsured
5. Location
6. Type of Reinsurance Assumed
7. Amount of In Force at End of Year
8. Reserve
9. Premiums
10. Reinsurance Payable on Paid and Unpaid Losses
11. Modified Coinsurance Reserve
12. Funds Withheld Under Coinsurance

Each row shall list each insurer for which reinsurance was assumed (life insurance, annuities, deposit funds and other liabilities without life or disability contingencies, and related benefits) for the calendar year.

Part 1 – Section 2. Reinsurance Assumed Accident and Health Insurance Listed by Reinsured Company as of December 31, Current Year

Please create a spreadsheet with the following columns (total columns 7 through 12):

1. ID Number/Company Code
2. This column is intentionally left blank
3. Effective Date
4. Name of Reinsured
5. Domiciliary Jurisdiction
6. Type of Reinsurance Assumed
7. Premiums
8. Unearned Premiums
9. Reserve Liability Other Than For Unearned Premiums
10. Reinsurance Payable on Paid and Unpaid Losses
11. Modified Coinsurance Reserve
12. Funds Withheld Under Coinsurance

Each row shall list each insurer for which reinsurance was assumed (accident and health insurance) for the calendar year.

Part 2. Reinsurance Recoverable on Paid and Unpaid Losses Listed by Reinsuring Company as of December 31, Current Year

Create a spreadsheet with the following columns (total each column 6 and 7):

1. ID Number/Company Code
2. This column is intentionally left blank
3. Effective Date
4. Name of Company
5. Location
6. Paid Losses
7. Unpaid Losses

Each row shall list each insurer for which reinsurance on paid and unpaid losses is recoverable.

Part 3 – Section 1. Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

Create a spreadsheet with the following columns (total each column 7 through 14):

1. ID Number/Company Code
2. This column is intentionally left blank
3. Effective Date

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4. Name of Company
5. Location
6. Type of Reinsurance Ceded
7. Amount in Force at End of Year
8. Reserve Credit Taken Current Year
9. Reserve Credit Taken Prior Year
10. Premiums
11. Outstanding Surplus Relief Current Year
12. Outstanding Surplus Relief Prior Year
13. Modified Coinsurance Reserve
14. Funds Withheld Under Coinsurance

Each row shall list each insurer for which reinsurance was ceded (life insurance, annuities, deposit funds and other liabilities without life or disability contingencies and related benefits).

Part 3 – Section 2. Reinsurance Ceded Accident and Health Insurance Listed by Reinsuring Company as of December 31, Current Year
Create a spreadsheet with the following columns (total each column 7 through 13):

1. ID Number/Company Code
2. This column is intentionally left blank
3. Effective Date
4. Name of Company
5. Location
6. Type
7. Premiums
8. Unearned Premiums (Estimated)
9. Reserve Credit Taken other than for Unearned Premiums
10. Outstanding Surplus Relief Current Year
11. Outstanding Surplus Relief Prior Year
12. Modified Coinsurance Reserve
13. Funds Withheld Under Coinsurance

Each row shall list each insurer for which reinsurance was ceded (accident and health insurance).

Historical Note

Exhibit D made by final exempt rulemaking, under Laws 2015, Ch. 119, § 3, effective November 30, 2015 (Supp. 15-4).

ARTICLE 17. EXAMINATIONS**R20-6-1701. Definitions**

- A. "Company" means any person engaging in or proposing or attempting to engage in any transaction or kind of insurance or surety business and any person or group of persons who may otherwise be subject to the administrative, regulatory or taxing authority of the Director.
- B. "Examination" shall be defined for purposes of this Article to mean any examination relating to the financial condition of a company.
- C. "Examiner" means any individual or firm having been authorized by the Director to conduct an examination under this Article.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1701 recodified from R4-14-1701 (Supp. 95-1).

R20-6-1702. Authority, Scope, and Scheduling of Examinations

- A. The Director shall examine an insurer under A.R.S. § 20-156(A) at least once every five years.
- B. Instead of the examination under subsection (A), the Director may accept the most recent examination report prepared by the National Association of Insurance Commissioners insurance regulatory authority of another state on any foreign or alien insurer if:
 1. The insurance regulatory authority was accredited under the National Association of Insurance Commissioners' Financial Regulation Standards and Accreditation Program at the time of the examination,
 2. A National Association of Insurance Commissioners accredited insurance regulatory authority supervised the examination, or
 3. At least one examiner employed or contracted by a National Association of Insurance Commissioners accredited insurance regulatory authority:
 - a. Participated in and reviewed the examination work papers and report, and
 - b. Signed an affidavit stating that the examination was performed in a manner consistent with the standards and procedures required by the National Association of Insurance Commissioners accredited insurance regulatory authority.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). Amended effective October 27, 1993 (Supp. 93-4). R20-6-1702 recodified from R4-14-1702 (Supp. 95-1). Amended by final rulemaking at 11 A.A.R. 2975, effective September 10, 2005 (Supp. 05-3).

R20-6-1703. Conduct of Examinations

- A. Upon determining that an examination should be conducted, the Director or the Director's designee shall issue an examination warrant appointing one or more examiners to perform the examination and instructing them as to the scope of the examination.
- B. Nothing contained in this Article shall be construed to limit the Director's authority to terminate or suspend any examination in order to pursue other legal or regulatory action pursuant to the insurance laws of this state or to pursue such action concurrent with the examination.
- C. The Director may disclose the content of an examination report, preliminary examination report or results, or any matter relating thereto, to the insurance department of any other state or country or to law enforcement officials of this or any other state or agency of the federal government at any time. Prior to

making such disclosure, the Director may require such other department or office to agree in writing to hold as confidential the examination report, preliminary examination report or results or any matter relating thereto until such time as the examination report, preliminary examination report or results or matter relating thereto are made public by the Director.

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1703 recodified from R4-14-1703 (Supp. 95-1).

R20-6-1704. Examination Reports

- A. All examination reports shall be comprised of only facts appearing upon the books, records, or other documents of the company, its agents or other persons examined, or as ascertained from the testimony of its officers or agents or other persons examined concerning its affairs, and such conclusions and recommendations as the examiners find warranted from the facts.
- B. No later than 60 days following completion of the examination, the examiner in charge shall submit to the Department a verified written report of examination under oath. Upon receipt of the verified report, the Department shall transmit the report to the company examined, together with a notice which shall afford the company examined a reasonable opportunity of not less than 10 days nor more than 30 days to make a written submission or rebuttal with respect to any matters contained in the examination report.
- C. Within 30 days after the end of the period allowed for the receipt of written submissions or rebuttals, the Director shall fully consider and review the report, together with any written submissions or rebuttals and any relevant portions of the examiner's workpapers and shall:
 1. File the examination report as submitted or with modification or corrections. If the examination report reveals that the company is operating in violation of any law, regulation or prior order of the Director, the Director may order the company to take any action necessary and appropriate to cure such violation; or
 2. Reject the examination report with directions to the examiners to reopen the examination for purposes of obtaining additional data, documentation or information, and resubmission pursuant to subsection (B).

Historical Note

Adopted effective February 22, 1993 (Supp. 93-1). R20-6-1704 recodified from R4-14-1704 (Supp. 95-1).

ARTICLE 18. PREPAID DENTAL PLAN ORGANIZATIONS**R20-6-1801. Definitions**

In this Chapter, the following definitions apply:

"Appointment" means a first-available, initial, non-emergent, diagnostic visit to a dentist.

"Board certified" means a dentist who is recognized by the appropriate specialty board of the Commission on Accreditation of Dental Education of the American Dental Association.

"Board eligible" means a dentist who successfully completes an approved training program in a specialty field recognized by the American Dental Association.

"Chief executive officer" means the person who has the authority and responsibility for the operation of a prepaid dental plan Organization according to applicable legal requirements and policies approved by the governing authority.

"Dental hygienist" means a person who is licensed to practice dental hygiene under A.R.S. § 32-1281 et seq.

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“Dentist” means a person who is licensed to practice dentistry under A.R.S. § 32-1201 et seq.

“Department” means the Arizona Department of Insurance.

“Diagnostic service” means a dental service intended to identify a dental abnormality, and includes a radiograph and a clinical exam.

“Director” means the director of the Arizona Department of Insurance.

“Emergency dental service” means a dental service intended to evaluate and stabilize a dental condition of recent onset, control bleeding, and relieve pain, and includes the provision of local anesthesia, and elimination of acute infection, but does not mean a medication that is prescribed by the dentist.

“General dentist” means a dentist whose practice is not limited to a specific area and who is not board certified.

“Governing authority” means the persons, including a board of trustees or board of directors, who have the ultimate authority and responsibility for the direction of a prepaid dental plan Organization.

“Organization” means a prepaid dental plan organization as defined in A.R.S. § 20-1001.

“Patient” means a person who is being attended by a dentist or dental hygienist to receive an examination, diagnosis, or dental treatment, or a combination of an examination, diagnosis, and dental treatment.

“Preventive service” means dental care intended to maintain dental health and prevent dental disease, including any combination of oral hygiene education, routine prophylaxis, and application of fluorides.

“Prophylaxis” means cleaning the teeth of a patient with healthy tissue using mild abrasives and dental instruments to remove plaque, calculus, and stains above the gum line.

“Provider directory” means an Organization’s published listing of all contracted network dentists.

“Radiograph” means a picture produced on a sensitive surface by a form of radiation other than light, including x-ray.

“Restorative service” means the use of a metal or composite filling or crown.

“Specialist” means a dentist whose practice is limited to one of the nine specialty categories recognized by the American Dental Association: endodontics, oral and maxillofacial surgery, oral and maxillofacial radiology, orthodontics and dentofacial orthopedics, pediatric dentistry, periodontics, prosthodontics, oral pathology, or dental public health.

“Treatment plan” means a statement of the services to be performed to eliminate or alleviate a patient’s symptoms or disease, based on a dentist’s assessment of the patient’s dental history, the clinical examination, and the dentist’s diagnosis.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1802. Application for Certificate of Authority

- A. A person who wishes to operate as prepaid dental plan organization in Arizona shall file an application for certificate of authority under A.R.S. § 20-1003 for the director’s review and approval under A.R.S. § 20-1004. The application shall contain all the information required in A.R.S. § 20-1003 and R20-6-1802.

- B. An authorized insurer shall issue the fidelity bond required under A.R.S. § 20-1004(A)(4).
- C. An Organization shall not commence operation of, or service under, a prepaid dental plan without approval of the director under A.R.S. § 20-1004.
- D. An application is deemed filed with the director when the director receives it. The applicant shall include fees under A.R.S. § 20-167 with the application.
- E. An applicant not domiciled in this state shall file a power of attorney as required by A.R.S. § 20-1003(A)(11) on a Department-prescribed form, with the application.
- F. Within 180 days after the director issues a certificate of authority to an Organization, the Organization shall notify the director in writing of each member appointed to the board of directors for the Organization under A.R.S. § 20-1003(A)(4).
- G. At the time it submits its application for certificate of authority, an Organization shall submit a written program of compliance with supporting documents that specify how the Organization will comply with the provisions of this Article. The written program of compliance shall contain the following:
1. The responsibilities of and qualifications for the following positions:
 - a. The Organization’s chief executive officer, and
 - b. The Organization’s dental director;
 2. A plan for provision of basic dental services required under R20-6-1806(A) and a copy of the schedule of benefits required under R28-6-1806(B);
 3. A description of the system for delivery of services under R20-6-1807;
 4. A description of the geographic area designated under R20-6-1808;
 5. A plan for compliance with contract requirements under R20-6-1809 and a copy of a contract with a general dentist and a specialist;
 6. A plan for compliance with records requirements under R20-6-1810; and
 7. The Organization’s quality improvement plan under R20-6-1811.
- H. An application shall include the following information:
1. The proposed number of members, and
 2. A copy of a letter from each network dentist that documents the dentist’s intent to contract with the Organization to provide services to patients under the Organization’s prepaid dental plan.
- I. The director may require that an applicant for a certificate of authority under A.R.S. § 20-1003(A)(14) submit information that discloses biographical, employment and business financial history, criminal activity, fingerprints, or any information that relates to the ability to operate a prepaid dental plan for principals, principal officers, controlling persons, and insurance producers of the applicant, if necessary for the protection of residents of this State.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1803. Chief Executive Officer

- A. The governing authority shall appoint a chief executive officer (CEO). The CEO shall have:
1. The education and experience to manage the Organization, and
 2. Responsibility for the geographic area in Arizona that the Organization serves, including:
 - a. Implementing the policies of the governing authority, and

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- b. Maintaining adequate personnel to ensure compliance with applicable Arizona statutes and rules.
- B.** The governing authority shall notify the Department within ten days after the effective date of a change in the appointment of the CEO.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1804. Dental Director

- A.** The governing authority or CEO shall appoint as the Organization's dental director a dentist licensed to practice dentistry in any state or territory of the United States or the District of Columbia.
- B.** The dental director shall perform at least the following functions for the Organization's geographic area in Arizona:
1. Participate on the Organization's quality improvement committee required under R20-6-1811;
 2. Oversee the Organization's program and processes for:
 - a. Maintaining and improving clinical quality of care, including continuity of care;
 - b. Provider relations;
 - c. Facility and dental record reviews; and
 - d. Provider credentialing and recredentialing;
 3. Be knowledgeable about and participate in decisions regarding the Organization's operations;
 4. Comply with A.R.S. § 20-2510(B) and (C) when directly denying, on the basis of medical necessity, a health care provider's request for prior authorization; and
 5. Timely respond to matters within the Organization's Arizona geographic area that require personal onsite attention or ensure that a designee who meets the requirements specified in subsection (D) timely responds to those matters.
- C.** Matters that require personal onsite attention include:
1. Urgent patient care issues that require examination of dental records or X-rays;
 2. Prompt personal discussion with a provider of urgent concerns relating to credentialing, disciplinary problems, access to care, or quality of care.
- D.** Any designee acting under subsection (B)(5) shall:
1. Be a dentist licensed to practice dentistry in any state or territory of the United States or the District of Columbia;
 2. Have expedient access to the dental director, the CEO, and other organization management personnel as necessary to resolve any matter requiring personal onsite attention; and
 3. Have the education, experience, and Organizational knowledge required to address the matter requiring personal onsite attention.
- E.** The Organization shall notify the Department in writing within ten days after the effective date of a change in the appointment of the dental director or any designee.
- F.** The requirements for a designee under subsections (B)(5), (D), and (E) shall not apply to an Organization with fewer than 2,000 members in Arizona.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1805. Required Reporting

- A.** An Organization shall submit to the Department in writing for review any proposed change to the program of compliance. The Department shall notify the Organization in writing within 30 days of receipt of the proposed change whether the submission is administratively complete. The Department shall com-

plete its substantive review and notify the Organization of approval or disapproval of the proposed change within 60 days of notification of administrative completeness.

- B.** An Organization shall provide the following information about the prepaid dental plan to the Department quarterly:
1. The total number of members and the number of members assigned to each general dentist's office;
 2. A list of all contracted network general dentists and specialists that notes those who have been added or deleted since the previous quarterly report;
 3. Verification that each specialist added to the network since the last quarterly report has graduated from a specialty graduate program accredited by the American Dental Association; Documentation of the Organization's quality improvement activities, including the number of providers who have been credentialed or re-credentialed since the last quarterly report, the number of facility reviews, and the number of chart reviews;
 4. The average wait time measured in weeks for an appointment for each network dentistry office;
 5. A copy of the current provider directory; and
 6. A complaint log with a summary of Organization responses by complaint category.
- C.** An Organization shall submit the following information to the Department at least annually:
1. Member satisfaction survey results and supporting data;
 2. Results of a survey of network general dentistry offices with supporting data confirming a recall system under R20-6-1809(B)(2);
 3. An electronic database that lists the name, address, and telephone number of each provider and whether the provider is accepting new members. The Organization shall submit the database for general dentists and specialists separately. The Organization shall submit any changes to this database to the Department quarterly; and
 4. A report that compiles all the copays listed in all the schedules of benefits offered by the Organization, with comparisons of the copays to the usual, customary, and reasonable fees, as determined by the Organization, for the procedures listed on the schedule of benefits.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1806. Basic Dental Services

- A.** A prepaid dental plan shall provide the basic dental services listed below:
1. Emergency dental services on a 24-hour-per-day basis,
 2. Diagnostic services,
 3. Preventive services, and
 4. Restorative services.
- B.** An Organization shall publish and make available to its members and purchasers a schedule of benefits that includes the dental plan's basic dental services and other available dental services and any associated copays.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1807. System for Delivery of Services

- A.** An Organization shall have a system for delivery of services that includes:
1. An adequate network of general dentists. To determine network adequacy, the Department shall consider the following:

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- a. Geographic distribution of network general dentists' offices,
 - b. The number of dental offices accepting new members,
 - c. The percentage of all network members who are able to schedule an appointment within nine weeks,
 - d. The availability of trained clinical support staff in the Arizona geographic area,
 - e. The ratio of population growth to the increase or decrease in the number of dentists in the Arizona geographic area, and
 - f. Current availability for appointments in all general dentist practices in Arizona; and
2. Provision for using specialists for dental services that cannot be provided by the Organization's network of contracted specialists, if the services are covered benefits.
- B.** If a network dental office that is open to new members has an appointment wait time of longer than nine weeks, for three consecutive calendar quarters, the director may require the Organization to close the office to new members until the wait time is less than nine weeks.
- C.** If more than 15% of the network offices that are open to new members have an appointment wait time of longer than nine weeks, the Organization shall submit a plan to the Department under which the Organization will, within 90 days, reduce the wait time to less than nine weeks. If the Organization does not reduce the wait time to less than nine weeks within the 90 day period the Organization shall refer the members who are waiting for an appointment to another network general dentist or a non-network general dentist who can schedule the member for an appointment in less than nine weeks. The member may choose to continue dental care under the prepaid dental plan with the referred dentist for the remainder of the member's enrollment period. The Organization shall provide the non-network services to the referred member at a cost that is no greater than if the services are provided by the member's assigned network dentist.
- D.** An Organization shall pay for emergency dental services provided to a member by a dentist licensed in the jurisdiction where the services are provided, subject to plan limitations disclosed in the dental care plan, including emergency dental services that occur:
1. Within the geographic area served by the member's designated provider but the provider is unavailable, or
 2. Occurs outside of the member's designated geographic service area.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1808. Geographic Areas

- A.** An Organization shall designate the geographic areas in Arizona in which the Organization intends to provide dental services that are reasonably convenient to the prospective members. The Organization shall provide a description of the geographic areas and locations of all facilities in which dental care will be provided under the prepaid dental plan. This information shall accompany or be included in any advertisements or sales materials provided to prospective employer groups and prospective members.
- B.** An Organization shall define its geographic areas by citing at least one of the following:
1. Local government jurisdictions, such as cities or counties;
 2. Street boundaries; or
 3. Area within a specified radius of an intersection.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1809. Contract Requirements

- A.** An Organization shall have a written contract with each provider that documents the requirements for providing services under the prepaid dental plan and the terms of the agreements between the parties. The Organization shall ensure that the provider complies with all contract requirements.
- B.** In addition to the requirements in subsection (A), an Organization shall ensure that its contract with a provider includes the following provisions:
1. That the Organization has authority to review the provider's records,
 2. That the provider is responsible to implement and maintain a process to inform assigned members of the need to schedule periodic preventive dental services based on the member's oral health status, and
 3. That the provider is responsible to complete any procedure undertaken upon a member if the contract is terminated or expires.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1810. Records

- A.** Dental records are the property of the provider and shall not be removed from the provider's possession, except:
1. With the patient's permission, including for routing records to a dental or medical practitioner for consultation or evaluation; or
 2. When subpoenaed by a court or BODEX.
- B.** An Organization shall maintain at its principal office a copy of each issued or delivered advertising matter or sales material, letter of solicitation, evidence of coverage, provider directory, certificate, agreement, or contract. The Organization shall note the date each advertising matter or sales material is filed with the Department and the date of distribution to any person. The advertising matter or sales material shall be maintained for at least three years.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1811. Quality Improvement

- A.** An Organization shall have a governing authority.
- B.** The governing authority shall appoint a quality improvement committee that consists of the chief executive officer or designee, the dental director, the person who manages the Organization's quality improvement process, and at least one dental health professional. The committee may also include network allied health professionals and members of the plan.
- C.** The quality improvement committee shall:
1. Meet at least quarterly,
 2. Review and evaluate dental services delivered under the Organization's plan, and
 3. Establish procedures for recordkeeping and distribution of committee reports.
- D.** An Organization shall provide the director with a copy of the minutes of each quality improvement committee meeting within 30 days of the quality improvement committee meeting.
- E.** An Organization shall maintain a written quality improvement plan that contains procedures for each of the following:

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1. Ensuring that a dentist licensed in any state or territory of the United States or District of Columbia reviews and evaluates dental care and services provided by each contracted general dentist at least once every three years;
2. Allocation of the Organization's resources to analyze a problem or any identified deficiency;
3. Implementing a corrective action plan and methods for monitoring improvement;
4. Notifying a member in writing of the member's responsibility to cooperate with those providing dental care services and of the member's rights to:
 - a. Voice concerns about the Organization or care provided;
 - b. Be provided with information about the Organization, its services, providers, and member rights and responsibilities;
 - c. Participate in decisions about the member's dental care; and
 - d. Be treated with respect and have the right to privacy recognized;
5. Monitoring and improving membership satisfaction;
6. Maintaining an accurate provider directory that meets at least the following requirements:
 - a. Lists only credentialed providers who are currently scheduling members for diagnosis and treatment; and
 - b. Clearly designates providers who are not accepting new members;
7. Review by the dental director of the following for initial credentialing of network providers:
 - a. Query to the National Practitioner Data Bank;
 - b. Query to BODEX;
 - c. Valid United States Drug Enforcement Administration certificate, if applicable;
 - d. Evidence of current malpractice insurance; and
 - e. Documentation that each specialist has graduated from an accredited specialty graduate program as required by BODEX.
8. Recredentialing, at least every three years, that updates information obtained in subsections (E)(7)(b) through (d), for the dental director's review.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1812. Confidentiality of Records

An Organization shall not disclose information obtained pertaining to the diagnosis, treatment, or health of a member to any person except:

1. To the extent necessary to carry out this Article;
2. Upon the express written consent of the member, applicant, provider, or Organization, as appropriate; or
3. Under statute or court order for the production or discovery of evidence or as part of a civil or criminal investigation.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

R20-6-1813. Assignment of Members

- A. Within 30 days of enrollment, an Organization shall assign a member to the provider the member chooses. The Organization, however, shall choose and assign a provider to a member within 30 days of any of the following:
 1. Receipt of a member enrollment form that does not designate a provider, or receipt of a member enrollment form that designates a provider who is unavailable;
 2. The date of the notice that the member's assigned provider intends to cease providing services; or
 3. The date the member's assigned provider becomes unavailable, for any reason.

- B. An Organization shall give each member the option of selecting a network provider other than the provider assigned by the Organization under subsection (A).
- C. An Organization shall maintain a continuous assignment process in compliance with subsection (A) and (B), allowing no more than 4% of members to be unassigned at any time.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 463, effective January 10, 2002 (Supp. 02-1).

ARTICLE 19. HEALTH CARE SERVICES ORGANIZATIONS OVERSIGHT**R20-6-1901. Applicability**

- A. This Article applies to:
 1. All proposed and existing health care services organizations (HCSOs), and
 2. Each product offered by an HCSO under the HCSO's certificate of authority.
- B. The Department shall not issue a certificate of authority to an HCSO unless the HCSO meets the requirements of this Article.
- C. The Department shall not require an existing HCSO to re-file information already on file with the Department, but the HCSO shall modify its operations and procedures as may be necessary to comply with this Article and file with the Department all additional information necessary to make statements complete and current.
- D. This Article applies to inpatient emergency care, but does not apply to emergency services.
- E. This Article applies only to covered services.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Amended by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1902. Definitions

In this Article, the following definitions apply:

"Access" or "accessibility" means the extent to which an enrollee can obtain timely covered services from a contracted provider at the appropriate level of care, and appropriate location.

"Adult" means an enrollee in the age group the HCSO has designated for an adult.

"Adult PCP" means a primary care provider practicing in any specialty the HCSO designates as adult primary care.

"Ancillary provider" means a provider of laboratory, radiology, pharmacy or rehabilitative services, physical therapy, occupational therapy, or speech therapy, home health services, dialysis, and durable medical equipment or medical supplies dispensed by order or prescription of a provider with the appropriate prescribing authority.

"Available" or "availability" means the extent to which the plan has contracted providers of the appropriate type and numbers at geographic locations to afford members access to timely covered services.

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“Chief executive officer” or “CEO” means the person who has the authority and responsibility for the operation of the health care services organization according to applicable legal requirements and policies approved by the governing authority.

“Child” means an enrollee in the age group the HCSO has designated for children.

“Contracted” means a provider has a current written agreement or an employment arrangement with an HCSO to provide covered services to an enrollee, or a current written agreement or an employment arrangement with a contracted provider to provide covered services to an enrollee.

“Covered” or “covered services” means the health care services described as covered benefits in the HCSO’s evidence of coverage.

“Day” means calendar day unless specified otherwise.

“Department” means the Department of Insurance.

“Effective process” means written policies and procedures that:

Outline the steps that the HCSO implements and consistently follows internally,

The HCSO subjects to internal quality improvement, and

The HCSO communicates to providers when established or changed.

“Emergency services” has the meaning in A.R.S. § 20-2801(3).

“Enrollee” means an individual who is enrolled in a health plan operated by an HCSO.

“Facility” means an institution that is licensed or authorized to furnish health care services in this state, including general hospitals, special hospitals, residential treatment centers, residential rehabilitation centers, skilled nursing facilities, urgent care centers, and ambulatory surgical treatment centers.

“Governing authority” means a person or body such as a board of trustees or board of directors in whom the ultimate authority and responsibility for the direction of the HCSO is vested.

“HCSO” means a health care services organization.

“Health care services” has the meaning in A.R.S. § 20-1051(6).

“High profile” means one of no fewer than four specialties designated by the HCSO, and does not include obstetrics-gynecology. An HCSO may designate a specialty as high profile on the basis of high volume or other basis the HCSO reasonably determines is directly related to providing covered services to a member.

“Hospital” means a facility that provides inpatient care, medical services, and continuous nursing services for the diagnosis and treatment of patients.

“Inpatient care” means the covered services that an enrollee who is admitted to a hospital receives for at least 24 consecutive hours.

“Inpatient emergency care” means covered services that would be emergency services if provided in a licensed hospital emergency facility.

“License” means documented authorization issued by the appropriate state of Arizona agency to operate a facility in Arizona, or to practice a health care profession in Arizona.

“Medically necessary” has the meaning set forth in the HCSO’s evidence of coverage.

“Network” means the group of providers contracted with an HCSO to provide covered services to an enrollee covered under the HCSO’s health benefit plan.

“Network exception” means an enrollee receives covered services from a non-contracted provider either:

Because there is no contracted provider accessible or available that can provide the enrollee timely covered services, or

For any reason the HCSO determines it is in the enrollee’s best interests to receive care from a non-contracted provider.

“Non-contracted” means a provider that does not have a contract with an HCSO to provide services to an enrollee.

“Normal business hours” means 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding state or national holidays.

“Outpatient care” means covered services that an enrollee who is not an inpatient receives.

“Pediatric primary care provider” means a physician or practitioner practicing in any specialty the HCSO designates as pediatric primary care.

“Physician” means a licensed doctor of allopathic, chiropractic, optometric, osteopathic, or podiatric medicine.

“Practitioner” means any individual other than a physician who is licensed to furnish health care services, including behavioral health care services, in this state.

“Preventive care” means health maintenance care the HCSO provides or arranges to prevent illness and to improve the general health of an enrollee, including:

Immunizations,

Health education,

Health evaluation and follow-up,

Early disease detection,

Screening tests appropriate for a person’s age and gender, and

Periodic health care examinations.

“Primary care” means any specialty the HCSO designates as primary care.

“Primary care physician” or “PCP” means a physician or practitioner practicing in a specialty the HCSO designates as primary care.

“Provider” means any physician, practitioner, ancillary provider, or facility.

“Quality improvement” means an HCSO’s system for assessing and improving the level of performance of key process and outcomes.

“Routine care” means covered primary care for an enrollee’s non-urgent, symptomatic condition.

“Rural” means a zip code area with fewer than 1,000 persons per square mile as calculated annually by a population data gathering service designated by the Director.

“Service area” means any geographic area designated by any HCSO and approved by the Director under A.R.S. § 20-1053(A)(11).

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“Specialty care provider” or “SCP” means a physician or practitioner who has education, training, or qualifications in a specialty, other than primary care, beyond the education or qualifications required for the license.

“Specialty” or “specialty care” means a specific area of medicine practiced by a physician or practitioner who has education, training, or qualifications in that specific area of medicine in addition to the education or qualifications required for the physician’s or practitioner’s license.

“Special hospital” means a hospital that is licensed to provide hospital services within a specific area of medicine, or limits patient admission according to age, gender, type of disease, or medical condition.

“Suburban area” means any zip code area with 1,000-3,000 persons per square mile, as calculated annually by a population data gathering service designated by the Director.

“Telemedicine” means diagnostic, consultation, and treatment services that occur in the physical presence of an enrollee on a real-time basis through interactive audio, video, or data communication.

“Timely” means services are provided at the time when medically necessary.

“Travel expenses” has the meaning set forth in writing by an HCSO.

“Urban area” means a zip code with more than 3,000 persons per square mile as calculated annually by a population data gathering service designated by the Director.

“Urgent care” means unscheduled services for an enrollee’s condition that requires medical attention not amenable to scheduling in order to avoid a serious risk of harm.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Amended by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1903. Documentation

The CEO shall ensure that the HCSO’s policies, procedures, plans, class specifications, orders, reports, minutes of meetings, contracts, agreements, records, and duty schedules are in writing, compiled and indexed in one or more manuals, and readily available for inspection by the Director.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Amended by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1904. Health Care Plan

- A. An HCSO shall submit a statement to the Department that describes the proposed health care plan.
- B. The HCSO shall have an organized system for the delivery of health care services contained in subsection (D) that includes the following:
 1. Contracted providers that provide services under the plan;
 2. An effective process to promote a continuing relationship between an enrollee and the same PCP; and
 3. An effective process for referrals that ensures continuity of care to an enrollee.
- C. The HCSO shall list:
 1. The proposed or actual enrollment;

2. The number and names of contracted, employed, or HCSO-owned providers that will serve the enrollees and the board eligibility or certification of each physician, if applicable; and
3. The plan for providing covered services to enrollees as required under this Article.

- D. The HCSO’s health care plan shall provide within the geographic area served the following basic health care services covered by the monthly charges in the evidence of coverage:
 1. Emergency care that includes emergency services and inpatient emergency care;
 2. Inpatient care;
 3. Specialty care, primary care, or ancillary care that includes diagnostic and therapeutic services;
 4. Outpatient care;
 5. Preventive care; and
 6. Emergency ambulance services under A.R.S. § 20-2801(2), and other ambulance services when approved by a plan physician.
- E. The HCSO shall provide appropriate coverage for out-of-area emergency care to an enrollee traveling outside the area served by the HCSO.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). R20-6-1904 repealed; new Section R20-6-1904 renumbered and amended from R20-6-1906 by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1905. Geographic Area

- A. An applicant shall describe the proposed geographic area in at least one of the following ways:
 1. Legal description,
 2. Local governmental jurisdiction such as city or county,
 3. Census tracts,
 4. Street boundaries, or
 5. Area within a specified radius of a specified intersection or a specified primary care center.
- B. An applicant shall submit a map that shows the boundaries for the proposed geographic area.
- C. An applicant shall submit a description of the proposed network including the data required under R20-6-1913(A)(2) and (A)(3).
- D. All advertising matter and sales material provided a prospective enrollee shall include a description of the geographic area in terms readily understandable by the general public.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). R20-6-1905 repealed; new Section R20-6-1905 renumbered and amended from R20-6-1907 by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1906. Chief Executive Officer

- A. The governing authority shall appoint a CEO who has appropriate education and experience to manage the HCSO. The governing authority shall define the authority and duties of the CEO in writing. The CEO is the appointed representative of the governing authority and is the executive officer of the HCSO.
- B. The CEO shall have at least the following duties and responsibilities:
 1. Manage the HCSO;
 2. Establish and implement policies, procedures, and effective processes of the HCSO;

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3. Act as liaison between the governing authority and the providers of healthcare and other services to the HCSO; and
 4. Establish a written plan of authority that will be in place in the CEO's absence.
- C. When there is a change of CEO, the governing authority shall notify Department within 10 days after the effective date of change.
- D. The HCSO shall ensure that all HCSO employees and contracted providers are knowledgeable about and qualified to perform the duties assigned to them through employment or by contract.
- E. The HCSO shall designate a central place of business within the major geographic area served at which the CEO shall be based and from which the HCSO shall direct administrative activities.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Section R20-6-1906 renumbered to R20-6-1904; new Section R20-6-1906 renumbered and amended from R20-6-1908 by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1907. Medical Director

- A. The HCSO shall designate a physician as medical director.
- B. The medical director shall be responsible for planning and implementing the method for the continuing review and evaluation of health care provided by the HCSO and the continuing education of its providers of health care services. The medical director may also serve as the CEO if the medical director has appropriate education and experience to manage the HCSO.
- C. The medical director responsibilities include:
 1. Supervising medical staff;
 2. Performance planning and evaluating medical staff;
 3. Coordinating medical staff activities; and
 4. Developing medical care policies.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Section R20-6-1907 renumbered to R20-6-1905; new Section R20-6-1907 renumbered and amended from R20-6-1909 by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1908. Quality Assurance

- A. The HCSO shall provide an effective process for a continuing review and evaluation of the covered services it provides to enrollees to ensure that:
 1. Treatment and level of covered services are appropriate and adequate and
 2. The quality of covered services is acceptable to the HCSO.
- B. The HCSO shall have a quality assurance committee that includes at least the CEO or designee, the medical director, and representative network providers. The quality assurance committee shall:
 1. Arrange for physicians or practitioners to review and evaluate covered services provided by others physicians or practitioners within the respective disciplines.
 2. Adopt administrative procedures covering frequency of meetings, recordkeeping, committee reports, and disseminating the reports.
- C. The HCSO's effective process in subsection (A) shall include the following:
 1. Standards for health care;

2. Monitoring of care;
3. Analysis of any deficiency;
4. Correcting a deficiency including submitting a schedule for correcting the deficiency, requiring continuing education for the provider, if appropriate, and follow-up and periodic reassessment of the deficiency.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Section R20-6-1908 renumbered to R20-6-1906; new Section R20-6-1908 renumbered and amended from R20-6-1911, by final rulemaking at 11 A.A.R. 4861, effective December 31, 2006 (Supp. 05-4).

R20-6-1909. Evaluation of Network

Each HCSO shall have an effective process to evaluate the adequacy of its network to provide an enrollee with timely covered services.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Former R20-6-1909 renumbered to R20-6-1907; new Section R20-6-1909 made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1910. Process for Referral, Prior Authorization, Precertification, or Network Exception

- A. An HCSO shall have an effective process for assisting an enrollee to obtain timely covered services when the enrollee or enrollee's referring provider cannot find a contracted provider who is timely accessible or available.
- B. An HCSO shall have an effective process during normal business hours for handling referrals, prior authorizations, precertifications, or network exceptions necessary for timely routine care. This process may include the HCSO's procedure for standing referrals required in A.R.S. § 20-1057.01.
- C. Each HCSO shall have an effective process to handle referrals or network exceptions necessary for timely urgent care seven days a week.
- D. An HCSO that requires prior authorization or precertification for urgent care shall have an effective process to handle requests for prior authorization or precertification 24 hours a day, seven days a week.
- E. An HCSO shall have an effective process for handling network exceptions that ensures the HCSO reimburses an enrollee for any out-of-network cost the enrollee incurs that the enrollee would not have incurred if the enrollee had received the services in-network.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Section repealed; new Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1911. HCSO Communication with Providers

An HCSO shall have an effective process for communicating with contracted providers regarding the following:

1. The providers in the network,
2. Contractual or administrative changes relating to enrollee access or provider availability, and
3. Procedures for handling claims and grievances submitted by providers.

Historical Note

New Section made by exempt rulemaking at 7 A.A.R. 2769, effective July 1, 2001 (Supp. 01-2). Former R20-6-

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1911 renumbered to R20-6-1908; new R20-6-1911 made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1912. Network Directories

- A.** An HCSO shall publish a provider network directory as follows:
1. An HCSO shall list the name, address, telephone number, specialty, and hospital affiliation for all in-area contracted physicians or practitioners.
 2. An HCSO may list ancillary providers by corporate or group name and is not required to list individual physicians or practitioners.
 3. An HCSO is not required to list physicians or practitioners in the following areas of specialties or areas of practice:
 - a. Emergency medicine;
 - b. Anesthesiology, except anesthesiologists who provide pain management services;
 - c. Hospital-based pathology;
 - d. Hospital-based radiology; and
 - e. Hospitalists.
 4. An HCSO that lists any of the physicians or practitioners in subsections R20-6-1912(A)(3)(a) through (A)(3)(e) may list by corporate or group name and is not required to list individual physicians or practitioners.
 5. An HCSO that uses hospitalists is not required to list the hospital affiliations of PCPs who do not admit or attend hospitalized members.
 6. An HCSO shall publish a provider network directory that lists all its contracted facilities and contains:
 - a. The name, address, and telephone number of each facility;
 - b. For each hospital at which the HCSO uses hospitalists, if any, a statement that the HCSO uses hospitalists at that hospital;
 - c. For an HCSO that uses hospitalists and does not list them in the directory, information on how an enrollee can find out what hospitalists or group of hospitalists it uses at each hospital;
- B.** The network directory shall conspicuously state in the directory the following:
1. Changes occur in the network after the directory is published and some providers listed in the directory may no longer be contracted,
 2. Enrollee coverage may depend on the contract status of the provider,
 3. Where the enrollee can obtain more recent directory information,
 4. The effective date of the network directory, and
 5. The method for an enrollee or prospective enrollee to find out which PCPs are accepting new enrollees from the HCSO.
- C.** Each HCSO shall make its network directory available on paper to enrollees or prospective enrollees requesting it. The HCSO shall:
1. Publish the paper directory at least once a year;
 2. Update or supplement the information in the paper directory at least every six months;
 3. Explain in the paper directory how an enrollee or prospective enrollee can use or get assistance using the HCSO's online or telephone directories, if any; and
 4. Have discretion to list physicians' or practitioners' hospital affiliations in its paper directory.
- D.** Each HCSO that has an online network directory shall:
1. Update the online directory at least monthly;

2. Make the online directory easy to use and user friendly; and
3. Explain, in the online directory, how an enrollee or prospective enrollee can obtain a paper directory.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1913. Demographic Information Reports

- A.** An HCSO shall report the following data to the Department:
1. For each enrollee, report annually:
 - a. Street address,
 - b. Zip code,
 - c. Gender, and
 - d. Year of birth.
 2. For all contracted providers, report semiannually:
 - a. Provider name,
 - b. Street address or addresses at which the provider provides covered services,
 - c. Zip code, and
 - d. Arizona license number,
 3. For all contracted physicians or practitioners, report semiannually:
 - a. Specialty, and
 - b. Medical or other applicable degree or information that designates the type of physician or practitioner.
- B.** The HCSO shall report the information in subsection (A) to the Department by the following deadlines:
1. For information in subsection (A)(1) as of December 31 of each calendar year, by February 15 of the next calendar year.
 2. For information in subsection (A)(2) as of June 30, by August 15 of the same calendar year.
 3. For information in subsection (A)(2) as of December 31, by February 15 of the next calendar year.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1914. Access

- An HCSO shall provide to or arrange for its enrollees services or appointments for services as follows:
1. For preventive care services from a contracted PCP, an appointment date within 60 days of the enrollee's request, or sooner if necessary, for the enrollee to be immunized on schedule.
 2. For routine-care services from a contracted PCP, an appointment date within 15 days of the enrollee's request to the PCP or sooner if medically necessary.
 3. For specialty care services from a contracted SCP, an appointment date within 60 days of the enrollee's request or sooner if medically necessary.
 4. In-area urgent care services from a contracted provider seven days per week.
 5. Timely non-emergency inpatient care services from a contracted facility.
 6. Timely services from a contracted physician or practitioner in a contracted facility including inpatient emergency care.
 7. Services from a contracted ancillary provider during normal business hours, or sooner if medically necessary.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6 1915. Alternative Access

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- A. As an alternative to providing access to covered services from a physician, an HCSO may provide access to covered services from an appropriately licensed practitioner.
- B. As an alternative to providing access to covered services at a hospital under R20-6-1914, an HCSO may provide access to covered services at another appropriately licensed facility.
- C. As an alternative to providing access to covered services from a physician or practitioner who sees an enrollee in person under R20-6-1914, an HCSO may provide access to necessary covered services through:
 - 1. Telephone calls and messages,
 - 2. Electronic mail,
 - 3. Communication with the physician's or practitioner's staff,
 - 4. Coverage by another physician or practitioner, or
 - 5. Telemedicine,
- D. An HCSO that panels enrollees to PCPs may panel enrollees to appropriately licensed practitioners.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1916. Availability Ratios

- A. An HCSO shall maintain a ratio of contracted adult PCPs to adults that is adequate to provide those adults with covered services. An HCSO with a Medicare Advantage (MA) plan may have one ratio that applies to both its insured and MA populations, or a separate ratio for each.
- B. An HCSO shall maintain a ratio of contracted pediatric PCPs to children that is adequate to provide those children enrollees with covered services.
- C. An HCSO shall maintain a ratio of contracted high profile SCPs to enrollees that is adequate to provide those enrollees with covered services that include services at contracted facilities. An HCSO with a MA plan may have one ratio that applies to both its insured and MA populations, or a separate ratio for each.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1917. Geographic Availability in an Urban Area

An HCSO shall provide each enrollee living in an urban area of the HCSO's service area the following:

- 1. Primary care services from a contracted PCP located within 10 miles or 30 minutes of the enrollee's home;
- 2. High profile specialty care services from a contracted SCP located within 15 miles or 45 minutes of the enrollee's home; and
- 3. Inpatient care in a contracted general hospital, or contracted special hospital, within 25 miles or 75 minutes of the enrollee's home.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1918. Geographic Availability in a Suburban Area

Each HCSO shall provide each enrollee member living in a suburban area within the HCSO's service area the following:

- 1. Primary care from a contracted PCP located within 15 miles or 45 minutes of the enrollee's home;

- 2. High profile specialty care services from a contracted SPC within 20 miles or 60 minutes of the enrollee's home; and
- 3. Inpatient care in a contracted hospital, or a contracted special hospital within 30 miles or 90 minutes of the enrollee's home.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1919. Geographic Availability in a Rural Area

An HCSO shall provide each enrollee living in a rural area with primary care services from a contracted physician or practitioner within 30 miles or 90 minutes of the enrollee's home.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1920. Travel Requirements

- A. An HCSO may require an enrollee to travel a greater distance in-area to obtain covered services from a contracted provider than the enrollee would have to travel to obtain equivalent services from a non-contracted provider, except where a network exception is medically necessary. Nothing in this Section creates an exception to R20-6-1918 through R20-6-1920.
- B. If the HCSO prior-authorizes services that require an enrollee to travel outside the HCSO service area because the services are not available in the area, the HCSO shall reimburse the enrollee for travel expenses. Except as provided under R20-6-1904(E)(6), an HCSO is not required to reimburse an enrollee for travel expenses the enrollee incurs to obtain covered services in-area.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

R20-6-1921. Enforcement Consideration

In determining the appropriate enforcement action or penalties for failure to comply with these rules, the Department shall consider any documentation the HCSO provides regarding:

- 1. Whether seasonal shifts in demand affect access and availability of covered services;
- 2. Whether the HCSO's demographic information has changed significantly since the HCSO's most recent report;
- 3. Whether an enrollee has refused to accept covered services the HCSO has offered in the time-frames or locations required of the HCSO by this Article;
- 4. Whether an enrollee has requested and obtained covered services from a contracted provider whose location, or appointment availability, or capacity result in the HCSO's non-compliance; and
- 5. Whether market factors indicate that on a short-term basis, compliance is not possible. Market factors include shortage of providers, enrollee or provider location, and provider practice or contracting patterns.

Historical Note

New Section made by final rulemaking at 11 A.A.R. 4861, effective December 31, 2005 (Supp. 05-4).

ARTICLE 20. CAPTIVE INSURERS**R20-6-2001. Reserved****R20-6-2002. Fees; Examination Costs**

- A.** A corporation applying for a license to do business as a captive insurer, under A.R.S. § 20-1098, shall pay a nonrefundable fee of \$1,000.00 to the Department for issuance of the license. A captive insurer that is a protected cell captive insurer, as defined in A.R.S. § 20-1098, also shall pay to the Department a nonrefundable fee of \$1,000 for each participant contract application that establishes a protected cell under A.R.S. § 20-1098.05(B)(9). The fee is payable in full at the time the applicant submits the application for license to the Department under A.R.S. § 20-1098.01.
- B.** A captive insurer shall pay a nonrefundable annual renewal fee of \$5,500.00 to the Department at the time of filing its annual report under A.R.S. § 20-1098.07. Under A.R.S. § 20-1098.01(J), a captive insurer that is a protected cell captive insurer also shall pay to the Department a nonrefundable annual renewal fee of \$2,500.00 for each protected cell at the time of filing its annual report under A.R.S. § 20-1098.07.
- C.** A captive insurer shall pay a nonrefundable fee of \$200.00 to the Department at the time of filing for issuance of an amended certificate of authority.
- D.** In addition to the fees prescribed in subsections (A) and (B), an applicant for a captive insurer license or a licensed captive insurer shall pay the costs of any examination the Director conducts, under A.R.S. § 20-1098.08.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 2478, effective July 1, 2002 (Supp. 02-2). Amended by final rulemaking at 11 A.A.R. 2977, effective September 13, 2005 (Supp. 05-3). Subsection (A) corrected at request of the Department, Office File No. M11-252, filed July 20, 2011 (Supp. 11-3).

ARTICLE 21. CUSTOMER INFORMATION SECURITY PROGRAM

Article 21, consisting of R20-6-2101 through R20-6-2104, made by final rulemaking at 10 A.A.R. 2260, effective July 13, 2004 (Supp. 04-2).

R20-6-2101. Definitions

The following definitions apply in this Article:

1. "Consumer" means an individual, or the individual's legal representative, who seeks to obtain, obtains, or has obtained an insurance product or service from a licensee that is to be used primarily for personal, family, or household purposes, and about whom the licensee has nonpublic personal information. Consumer can include a prospective applicant, policyholder, certificateholder, insured, or claimant.
2. "Customer" means a consumer who has a continuing relationship with a licensee under which the licensee provides one or more insurance products or services to the consumer that are used primarily for personal, family, or household purposes.
3. "Customer information" means nonpublic personal information and privileged information about a customer whether in paper, electronic, or other form, that is maintained by or on behalf of an insurance institution, insurance producer, or insurance support organization.
4. "Customer information systems" means the electronic, or physical methods used to access, collect, store, use, transmit, protect, or dispose of customer information.
5. "Insurance institution" has the meaning prescribed in A.R.S. § 20-2102(10).

6. "Insurance producer" means a person required to be licensed under A.R.S. Title 20, Chapter 2, Article 3 to sell, solicit, or negotiate insurance and includes a managing general agent as defined in A.R.S. § 20-311.
7. "Insurance support organization" has the meaning prescribed in A.R.S. § 20-2102(13).
8. "Licensee" means an insurance institution, insurance producer, or insurance support organization, but does not include a purchasing group or an unauthorized insurer in regard to the excess line business conducted under Title 20, Chapter 2, Article 5.
9. "Personal information" has the meaning prescribed in A.R.S. § 20-2102(19).
10. "Privileged information" has the meaning prescribed in A.R.S. § 20-2102(22).
11. "Service provider" means a person that maintains, processes, or otherwise is permitted access to customer information through its provision of services directly to a licensee.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2260, effective July 13, 2004 (Supp. 04-2).

R20-6-2102. Customer Information Security Program

A licensee shall implement a comprehensive written customer information security program that includes administrative, technical, and physical safeguards for the protection of customer information. The administrative, technical, and physical safeguards included in the information security program shall be appropriate to the size and complexity of the licensee and the nature and scope of its activities.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2260, effective July 13, 2004 (Supp. 04-2).

R20-6-2103. Objectives of Customer Information Security Program

A licensee's customer information security program shall be designed to:

1. Ensure the security and confidentiality of customer information;
2. Protect against any anticipated threats or hazards to the security or integrity of the information; and
3. Protect against unauthorized access to or use of the information.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2260, effective July 13, 2004 (Supp. 04-2).

R20-6-2104. Guidelines for Methods of Development and Implementation

A licensee may implement the requirements of R20-6-2102 and R20-6-2103 by the actions and procedures prescribed in this Section, which are non-exclusive illustrations:

1. A licensee may assess risk by:
 - a. Identifying reasonably foreseeable internal or external threats that could result in unauthorized disclosure, misuse, alteration, or destruction of customer information or customer information systems;
 - b. Assessing the likelihood and potential damage of these threats, taking into consideration the sensitivity of customer information; and
 - c. Assessing the sufficiency of policies, procedures, customer information systems, and other safeguards in place to control risks.
2. A licensee may manage and control risk by:

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- a. Designing its information security program to control the identified risks, commensurate with the sensitivity of the information, as well as the complexity and scope of the licensee's activities;
 - b. Training staff to implement the licensee's information security program; and
 - c. Regularly testing or otherwise regularly monitoring the key controls, systems and procedures of the information security program. The licensee shall determine the frequency and nature of these tests or other monitoring practices by the licensee's risk assessment.
3. A licensee may oversee service provider arrangements by:
 - a. Exercising appropriate due diligence in selecting its service providers; and
 - b. Requiring its service providers to implement measures designed to meet the objectives of this Article, and, where indicated by the licensee's risk assessment, taking appropriate steps to confirm that its service providers have satisfied these obligations.
 4. A licensee may monitor, evaluate, and adjust, as appropriate, its information security program in light of any relevant changes in technology, the sensitivity of its customer information, internal or external threats to information, and the licensee's own changing business arrangements, such as mergers and acquisitions, alliances and joint ventures, outsourcing arrangements, and changes to customer information systems.
- A. This Article applies to rates charged by health insurers for individual health insurance. This Article does not apply to rates charged by health insurers for the following:
 1. Health insurance that a health insurer issues to an employer or to any group described in either A.R.S. § 20-1401 or A.R.S. § 20-1404(A), except health insurance issued to an association or its individual members as described in R20-6-2301(B)(7)(b);
 2. Grandfathered health plan coverage as defined in 45 CFR 147.140; or
 3. Health insurance that covers excepted benefits as described in section 2791(c) of the PHS Act, 42 U.S.C. 300gg-91(c).
 - B. In this Article, the following definitions apply:
 1. "Department" means the Arizona Department of Insurance.
 2. "Blanket disability insurance" has the meaning prescribed in A.R.S. § 20-1404(A).
 3. "CMS" means the Centers for Medicare & Medicaid Services.
 4. "Federal medical loss ratio standard" means the applicable medical loss ratio standard determined under 45 CFR 158, Subpart B.
 5. "Health insurance" means disability insurance as defined in A.R.S. § 20-253, a health care plan as defined in A.R.S. § 20-1051(5) and disability insurance or a health care plan offered by a hospital service corporation, medical service corporation or hospital, medical, dental and optometric service corporation as defined in A.R.S. § 20-822(3).
 6. "Health insurer" means an insurer, as that term is defined in A.R.S. § 20-104, authorized to transact disability insurance in Arizona, a health care services organization as defined in A.R.S. § 20-1051(7) or a hospital service corporation, medical service corporation or hospital, medical, dental and optometric service corporation as defined in A.R.S. § 20-822(3).
 7. "Individual health insurance" means health insurance that a health insurer issues to either:
 - a. An individual, to cover:
 - i. The individual, or
 - ii. The individual's dependents, or
 - iii. The individual and the individual's dependents.
 - b. An association or its individual members to cover the individual members and their dependents, and which the Department would regulate under A.R.S. Title 20, Chapter 6 as individual health insurance if the health insurer did not issue it to an association or individual members of an association.
 8. "PHS Act" means Part A of Title XXVII of the Public Health Service Act, 42 U.S.C. Chapter 6A.
 9. "Product" means a package of health insurance benefits with a discrete set of rating and pricing methodologies that a health insurer offers as individual insurance in Arizona.
 10. "Preliminary justification" means a justification that consists of the parts described in R20-6-2302(A).
 11. "Rate increase" means an increase of the rates for an individual health insurance product that a health insurer offers in Arizona that:
 - a. Results from a change to the underlying rate structure of the product, and
 - b. May result in premium changes for the product.
 12. "Secretary" means the Secretary of the United States Department of Health and Human Services.

Historical Note

New Section made by final rulemaking at 10 A.A.R. 2260, effective July 13, 2004 (Supp. 04-2).

ARTICLE 22. MILITARY PERSONNEL**R20-6-2201. Military Sales Practices**

- A. The Department incorporates by reference the National Association of Insurance Commissioners (NAIC) Military Sales Practices Model Regulation June 2007 (Model Regulation), and no future editions or amendments, which is on file with the Department of Insurance, 2910 N. 44th St., Phoenix, AZ 85018 and available from the National Association of Insurance Commissioners, Publications Department, 2301 McGee St., Suite 800, Kansas City, MO 64108.
- B. The Model Regulation is modified as follows:
 1. In addition to the terms defined in the Model Regulation, the following definitions apply:
 - a. "Commissioner" means the Director of the Arizona Department of Insurance.
 - b. "Regulation" means Article.
 2. Section 3 is modified to insert "A.R.S. § 20-106, 20-142 and 20-143" after "of."
 3. Section 7(E)(5)(b) is modified to insert "A.R.S. § 20-1241 et seq., R20-6-202, and R20-6-209" after "requirements of."
 4. Subsection 7(F)(5) of the Model Regulation is excluded from this Section.

Historical Note

New Section made by final rulemaking at 13 A.A.R. 4215, effective January 5, 2008 (Supp. 07-4).

ARTICLE 23. THRESHOLD RATE REVIEW – INDIVIDUAL HEALTH INSURANCE**R20-6-2301. Applicability; Definitions**

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13. "Threshold rate increase" means a rate increase that meets or exceeds an Arizona-specific threshold as noticed by the Secretary in 45 CFR 154.200, provided:
- The average increase for all enrollees weighted by premium volume meets or exceeds the applicable threshold; and
 - If a rate increase that does not otherwise meet or exceed the Arizona-specific threshold meets or exceeds the Arizona-specific threshold when combined with a previous increase or increases during the 12-month period preceding the date on which the rate increase would become effective, then the rate increase must be considered to meet or exceed the Arizona-specific threshold and is subject to threshold rate review that shall include a review of the aggregate rate increases during the applicable 12-month period.
14. "Threshold rate review" means the review by the Department under this Article of a threshold rate increase.
15. "Unreasonable rate increase" means a rate increase that results in benefits that are not reasonable in relation to the premium the health insurer charges for the product. The following factors are relevant in determining whether a rate increase results in benefits that are unreasonable in relation to premium:
- The rate increase results in a projected medical loss ratio below the federal medical loss ratio standard after accounting for any adjustments allowable under federal law;
 - One or more of the assumptions on which the health insurer based the rate increase is not supported by sound actuarial reasoning, data and analysis;
 - The choice of assumptions or combination of assumptions on which the insurer based the rate increase is unreasonable;
 - The health issuer provides data or documentation that is incomplete, inadequate or otherwise does not provide a basis upon which the Department can determine the reasonableness of a rate increase; or
 - The increase results in premium differences between insureds within similar risk categories that are unfairly discriminatory under A.R.S. Title 20, Chapter 2, Article 6.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 2721, effective October 3, 2012 (Supp. 12-4).

R20-6-2302. Disclosure of Preliminary Justification

- A.** Preliminary Justification. For each threshold rate increase for each affected product, a health insurer shall submit to the Department and to CMS, on a form and in the manner prescribed by the Secretary in 45 CFR 154.215, a preliminary justification that contains all of the following:
- Preliminary Justification Part I. A summary of the content of the threshold rate increase that includes:
 - Historical and projected claims experience;
 - Trend projections related to utilization, and service or unit cost;
 - Any claims assumptions related to benefit changes;
 - Allocation of the overall rate increase to claims and non-claims costs;
 - Per enrollee per month allocation of current and projected premium; and
 - Three year history of rate increases for the product associated with the rate increase.

- Preliminary Justification Part II. A written description that justifies the rate increase and that contains a simple and brief narrative describing the data and assumptions the health insurer used to develop the rate increase, and includes the following:
 - An explanation of the most significant factors causing the rate increase, including a brief description of the relevant claims and non-claims expense increases reported in subsection (A)(1); and
 - A brief description of the overall experience of the policy, including historical and projected expenses, and loss ratios.
- A health insurer may submit a single, combined preliminary justification that contains all the information in subsections (A)(1) and (2) for threshold rate increases that affect more than one product if the health insurer has aggregated the claims experience of all products to calculate the rate increases and the rate increases are the same for all products.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 2721, effective October 3, 2012 (Supp. 12-4).

R20-6-2303. Timing for Submission of Preliminary Justification

- A.** If R20-6-607 applies to a threshold rate increase, the health insurer shall submit its preliminary justification to the Department and to CMS on the date on which the health insurer files the rate increase request under R20-6-607.
- B.** If R20-6-607 does not apply to a threshold rate increase, the health insurer shall submit the preliminary justification to the Department and to CMS at least 60 days prior to the date the health insurer intends to implement the threshold rate increase in Arizona.
- C.** The Department shall provide access from its website to the Parts I and II of the Preliminary Justifications of the proposed rate increases that it reviews and have a mechanism for receiving public comments on those proposed rate increases.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 2721, effective October 3, 2012 (Supp. 12-4).

R20-6-2304. Response to Unreasonableness Determination

If the health insurer receives from CMS a notice that the Department has determined that the health insurer's threshold rate increase is unreasonable, the health insurer shall select one of the following three options:

- Option to not implement the rate increase determined unreasonable. Within 30 days of receiving from CMS the Department's determination, the health insurer shall notify the Department and CMS that it will not implement the rate increase and request the Department to withdraw the rate increase request;
- Option to implement a smaller rate increase than the rate determined unreasonable. Within 30 days of receiving from CMS the Department's determination, the health insurer shall notify the Department and CMS, on a form and in the manner prescribed by the Secretary, that it intends to implement a rate increase that is smaller than the one determined unreasonable. One of the following shall apply to this option:
 - If the health insurer selects this option and the smaller rate increase is not a threshold rate increase, the smaller rate increase is not subject to this Article;
 - If the health insurer selects this option, and R20-6-607 applied to the rate increase the Department determined to be unreasonable, the health insurer

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shall revise the rate increase filing to reflect the smaller rate increase or file a new rate increase. If the smaller rate increase is a threshold rate increase, the health insurer shall submit a new preliminary justification on the date the health insurer revises the rate increase filing or files a new rate increase; or

- c. If the health insurer selects this option, and R20-6-607 did not apply to the rate increase the Department determined to be unreasonable, and the smaller increase is a threshold rate increase, the health insurer shall submit to the Department and to CMS a new preliminary justification at least 60 days prior to the date the health insurer intends to implement the smaller increase in Arizona.
3. Option to implement the rate increase determined unreasonable. Within 10 business days after the health insurer either implements the rate increase that the Department determined unreasonable, or receives from CMS the Department's determination, the health insurer shall:
 - a. Submit, to the Department and to CMS, a final justification in response to the Department's determination. The information in the final justification shall be the same as the information submitted by the insurer under R20-6-2302(A)(1) and (2) in the preliminary justification supporting the rate increase; and
 - b. Prominently post on its website, on a form and in the manner prescribed by the Secretary under 45 CFR 154.230 the following information:
 - i. The Department's determination that the rate increase is unreasonable and Department's explanation of the Department's analysis of the relevant factors set forth in R20-6-2305(A)(1) and (2), and
 - ii. The health insurer's final justification for implementing the rate increase.
 - c. Continue to make the information in subsection (3)(b) available to the public on its website for at least three years.

Historical Note

New Section made by final rulemaking at 18 A.A.R. 2721, effective October 3, 2012 (Supp. 12-4).

R20-6-2305. Threshold Rate Increase Documentation**Requirements**

- A. For a threshold rate increase, a health insurer shall submit to the Department documentation that is sufficient to allow the Department to assess:
 1. The reasonableness of the assumptions used by the health insurer to develop the proposed rate increase and the validity of the historical data underlying the assumptions, and
 2. The health insurer's data related to past projections and actual experience.
- B. To the extent applicable to the submission under review by the Department, the health insurer shall submit documentation that includes all of the following:
 1. The impact of medical trend changes by major service categories;
 2. The impact of utilization changes by major service categories;
 3. The impact of cost-sharing changes by major service categories;
 4. The impact of benefit changes;
 5. The impact of changes in enrollee risk profile;
 6. The impact of any overestimate or underestimate of medical trend for prior year periods related to the rate increase;
 7. The impact of changes in reserve needs;
 8. The impact of changes in administrative costs related to programs that improve health care quality;
 9. The impact of changes in other administrative costs;
 10. The impact of changes in applicable taxes, licensing or regulatory fees;
 11. Medical loss ratio;
 12. The health insurance insurer's capital and surplus; and
 13. Other relevant documentation at the discretion of the Director.
- C. A health insurer shall submit all documentation required under subsection (A) or (B) at the same time that:
 1. The health insurer submits the preliminary justification required under R20-6-2302, or
 2. The health insurer submits any new preliminary justification required under R20-6-2304(2)(b) and (c).

Historical Note

New Section made by final rulemaking at 18 A.A.R. 2721, effective October 3, 2012 (Supp. 12-4).

20-143. Rule-making power

- A. The director may make reasonable rules necessary for effectuating any provision of this title.
- B. The director shall make rules concerning proxies, consents or authorizations in respect of securities issued by domestic stock insurance companies having a class of equity securities held of record by one hundred or more persons to conform with the requirements of section 12(g)(2)(G)(ii) of the securities exchange act of 1934, as amended, and as may be amended. Such rule shall not apply to any such company having a class of equity securities which are registered or are required to be registered pursuant to section 12 of the securities exchange act of 1934, as amended, or as may be amended. Whenever such equity securities of any such company are registered or are required to be registered pursuant to section 12 of the securities exchange act of 1934, as amended, or as may be amended, then, no person shall solicit or permit the use of his name to solicit, in any manner whatsoever, any proxy, consent or authorization in respect of any equity security of such company without having first complied with the rules prescribed by the securities and exchange commission pursuant to section 14 of the securities exchange act of 1934, as amended, or as may be amended.
- C. All rules made pursuant to this section shall be subject to title 41, chapter 6.
- D. In addition to any other penalty provided, wilful violation of any rule made by the director is a violation of this title.

20-261.08. Rules

The director may adopt rules pursuant to title 41, chapter 6 to implement sections 20-261.03, 20-261.05, 20-261.06 and 20-261.07 relating to credit for reinsurance.

20-448.01. Required insurance procedures relating to HIV information; confidentiality; violations; penalties; definitions

- A. In this section unless the context otherwise requires:
 - 1. "Confidential HIV-related information" means information concerning whether a person has had an HIV-related test or has HIV infection, HIV-related illness or acquired immune deficiency syndrome and includes information which identifies or reasonably permits identification of that person or the person's contacts.
 - 2. "HIV" means the human immunodeficiency virus.
 - 3. "HIV-related test" means a laboratory test or series of tests for the virus, components of the virus or antibodies to the virus thought to indicate the presence of HIV infection.
 - 4. "Protected person" means a person who takes an HIV-related test or who has been diagnosed as having HIV infection, acquired immune deficiency syndrome or HIV-related illness.
 - 5. "Person" includes all entities subject to regulation under title 20, the employees, contractors and agents thereof, and anyone performing insurance related tasks for such entities, employees, contractors or agents.
- B. Except as otherwise specifically authorized or required by this state or by federal law, no person may require the performance of, or perform an HIV-related test without first receiving the specific written informed consent of the subject of the test who has capacity to consent or, if the

subject lacks capacity to consent, of a person authorized pursuant to law to consent for that person. Written consent shall be in a form as prescribed by the director.

C. No person who obtains confidential HIV-related information in the course of processing insurance information or insurance applications or pursuant to a release of confidential HIV-related information may disclose or be compelled to disclose that information except to the following:

1. The protected person or, if the protected person lacks capacity to consent, a person authorized pursuant to law to consent for the protected person.
2. A person to whom disclosure is authorized in writing pursuant to a release as set forth in subsection E of this section, including but not limited to a physician designated by the insured or a medical information exchange for insurers operated under procedures intended to ensure confidentiality, provided that in the case of a medical information exchange:
 - (a) The insurer will not report that blood tests of an applicant showed the presence of the AIDS virus antibodies, but only that unspecified blood test results were abnormal.
 - (b) Reports must use a general code that also covers results of tests for many diseases or conditions, such as abnormal blood counts that are not related to HIV, AIDS, AIDS related complex or similar diseases.
3. A government agency specifically authorized by law to receive the information. The agency is authorized to redisclose the information only pursuant to this section or as otherwise permitted by law.
4. A person regulated by this title to which disclosure is ordered by a court or administrative body pursuant to section 36-665.
5. The industrial commission or parties to an industrial commission claim pursuant to the provisions of section 23-908, subsection D and section 23-1043.02.

D. Test results and application responses may be shared with the underwriting departments of the insurer and reinsurers, or to those contractually retained medical personnel, laboratories, and insurance affiliates, excluding agents and brokers, which are involved in underwriting decisions regarding the individual's application if disclosure is reasonably necessary to make the underwriting decision regarding such application, and claims information may be shared with claims personnel and attorneys reviewing claims if disclosure is reasonably necessary to process and resolve claims.

E. A release of confidential HIV-related information pursuant to subsection C, paragraph 2 of this section shall be signed by the protected person or, if the protected person lacks capacity to consent, a person authorized pursuant to law to consent for the protected person. A release shall be dated and shall specify to whom disclosure is authorized, the purpose for disclosure and the time period during which the release is effective. A general authorization for the release of medical or other information is not a release of confidential HIV-related information unless the authorization specifically indicates its purpose as a general authorization and an authorization for the release of confidential HIV-related information and complies with the requirements of this section.

F. A person to whom confidential HIV-related information is disclosed pursuant to this section shall not disclose the information to another person except as authorized by this section. This

subsection does not apply to the protected person or a person who is authorized pursuant to law to consent for the protected person.

G. If a disclosure of confidential HIV-related information is made pursuant to the provisions of a written release as permitted by subsection C, paragraph 2 of this section, the disclosure shall be accompanied by a statement in writing which warns that the information is from confidential records which are protected by state law that prohibits further disclosure of the information without the specific written consent of the person to whom it pertains or as otherwise permitted by law.

H. The person making a disclosure in accordance with subsection C, paragraphs 3, 4 and 5, and subsection G of this section shall keep a record of all disclosures for the time period prescribed by the director. On request, a protected person or his legal representative shall have access to the record.

I. Except as otherwise provided pursuant to this section or subject to an order or search warrant issued pursuant to section 36-665, no person who receives confidential HIV-related information pursuant to a release of confidential HIV-related information may disclose that information to another person or legal entity or be compelled by subpoena, order, search warrant or other judicial process to disclose that information to another person or legal entity.

J. The director shall adopt rules to implement the allowable tests and testing procedures, written consent to perform a human immunodeficiency virus related test, procedures for confidentiality and disclosure of medical information and procedures for gathering underwriting information and may adopt additional rules reasonable and necessary to implement this section.

K. Notwithstanding any other provision of law to the contrary, nothing in this section shall be interpreted to restrict the director's authority to full access to records of any entity subject to regulation under title 20, including but not limited to all records containing confidential HIV-related information. The director may only redisclose confidential HIV-related information in accordance with this section.

L. A protected person, whose rights provided in this section have been violated by a person or entity described in subsection A, paragraph 5 of this section, has those individual remedies specified in section 20-2118 against such a person or entity.

20-461. Unfair claim settlement practices

A. A person shall not commit or perform with such a frequency to indicate as a general business practice any of the following:

1. Misrepresenting pertinent facts or insurance policy provisions relating to coverages at issue.
2. Failing to acknowledge and act reasonably and promptly upon communications with respect to claims arising under an insurance policy.
3. Failing to adopt and implement reasonable standards for the prompt investigation of claims arising under an insurance policy.
4. Refusing to pay claims without conducting a reasonable investigation based upon all available information.
5. Failing to affirm or deny coverage of claims within a reasonable time after proof of loss statements have been completed.

6. Not attempting in good faith to effectuate prompt, fair and equitable settlements of claims in which liability has become reasonably clear.
7. As a property or casualty insurer, failing to recognize a valid assignment of a claim. The property or casualty insurer shall have the rights consistent with the provisions of its insurance policy to receive notice of loss or claim and to all defenses it may have to the loss or claim, but not otherwise to restrict an assignment of a loss or claim after a loss has occurred.
8. Compelling insureds to institute litigation to recover amounts due under an insurance policy by offering substantially less than the amounts ultimately recovered in actions brought by the insureds.
9. Attempting to settle a claim for less than the amount to which a reasonable person would have believed he was entitled by reference to written or printed advertising material accompanying or made part of an application.
10. Attempting to settle claims on the basis of an application which was altered without notice to, or knowledge or consent of, the insured.
11. Making claims payments to insureds or beneficiaries not accompanied by a statement setting forth the coverage under which the payments are being made.
12. Making known to insureds or claimants a policy of appealing from arbitration awards in favor of insureds or claimants for the purpose of compelling them to accept settlements or compromises less than the amount awarded in arbitration.
13. Delaying the investigation or payment of claims by requiring an insured, a claimant or the physician of either to submit a preliminary claim report and then requiring the subsequent submission of formal proof of loss forms, both of which submissions contain substantially the same information.
14. Failing to promptly settle claims if liability has become reasonably clear under one portion of the insurance policy coverage in order to influence settlements under other portions of the insurance policy coverage.
15. Failing to promptly provide a reasonable explanation of the basis in the insurance policy relative to the facts or applicable law for denial of a claim or for the offer of a compromise settlement.
16. Attempting to settle claims for the replacement of any nonmechanical sheet metal or plastic part which generally constitutes the exterior of a motor vehicle, including inner and outer panels, with an aftermarket crash part which is not made by or for the manufacturer of an insured's motor vehicle unless the part meets the specifications of section 44-1292 and unless the consumer is advised in a written notice attached to or printed on a repair estimate which:
 - (a) Clearly identifies each part.
 - (b) Contains the following information in ten point or larger type:

This estimate has been prepared based on the use of replacement parts supplied by a source other than the manufacturer of your motor vehicle. Warranties applicable to these replacement parts are provided by the manufacturer or distributor of these parts rather than the manufacturer of your vehicle.
17. As an insurer subject to section 20-826, 20-1342, 20-1402 or 20-1404, or as an insurer of the same type as those subject to section 20-826, 20-1342, 20-1402 or 20-1404 that issues policies, contracts, plans, coverages or evidences of coverage for delivery in this state, failing to

pay charges for reasonable and necessary services provided by any physician licensed pursuant to title 32, chapter 8, 13 or 17, if the services are within the lawful scope of practice of the physician and the insurance coverage includes diagnosis and treatment of the condition or complaint, regardless of the nomenclature used to describe the condition, complaint or service.

18. Failing to comply with chapter 15 of this title.

19. Denying liability for a claim under a motor vehicle liability policy in effect at the time of an accident without having substantial facts based on reasonable investigation to justify the denial for damages or injuries that are a result of the accident and that were caused by the insured if the denial is based solely on a medical condition that could affect the insured's driving ability.

B. Nothing in subsection A, paragraph 17 of this section shall be construed to prohibit the application of deductibles, coinsurance, preferred provider organization requirements, cost containment measures or quality assurance measures if they are equally applied to all types of physicians referred to in this section, and if any limitation or condition placed upon payment to or upon services, diagnosis or treatment by any physician covered by this section is equally applied to all physicians referred to in subsection A, paragraph 16 of this section, without discrimination to the usual and customary procedures of any type of physician. A determination under this section of discrimination to the usual and customary procedures of any type of physician shall not be based on whether an insurer applies medical necessity review to a particular type of service or treatment.

C. In prescribing rules to implement this section, the director shall follow, to the extent appropriate, the national association of insurance commissioners unfair claims settlement practices model regulation.

D. Nothing contained in this section is intended to provide any private right or cause of action to or on behalf of any insured or uninsured resident or nonresident of this state. It is, however, the specific intent of this section to provide solely an administrative remedy to the director for any violation of this section or rule related to this section.

E. The director shall deposit, pursuant to sections 35-146 and 35-147, all civil penalties collected pursuant to this article in the state general fund.

20-481.22. Power to make rules

The director may, upon notice and opportunity for all interested persons to be heard, issue such rules and orders as shall be necessary to carry out the provisions of this article, subject to title 41, chapter 6.

20-1691.02. Adoption of rules

The director may adopt reasonable rules to implement this article, including rules that:

1. Establish specific standards for policy provisions of long-term care insurance policies, including terms of renewability, initial and subsequent conditions of eligibility, nonduplication of coverage, coverage of dependents, preexisting conditions, termination of insurance, continuation, conversion, probationary periods, limitations, exceptions, reductions, elimination periods, replacement, recurrent conditions and definitions.

2. Establish loss ratio standards for long-term care insurance policies provided that a specific reference to long-term care insurance policies is contained in the rule.

3. Promote premium adequacy and protect policyholders in the event of substantial rate increases.
4. Establish standards for the manner, content and required disclosure for the sale of long-term care insurance policies, including disclosure of policy provisions, conditions and limitations.
5. Prescribe a standard format, including style, arrangement and overall appearance, and the content of an outline of coverage.
6. Establish minimum standards for marketing practices, insurance producer testing and reporting practices relating to long-term care insurance and penalties for violating the standards.
7. Specify the type or types of nonforfeiture benefits to be offered as part of a long-term care insurance policy and certificate, the standards for nonforfeiture benefits and the requirements for contingent benefit on lapse, including a determination of the specified period of time during which a contingent benefit on lapse will be available and the substantial premium rate increase that triggers a contingent benefit on lapse as described in section 20-1691.11.

CRIMINAL JUSTICE COMMISSION

Title 10, Chapter 4, Article 1, Crime Victim Compensation Program

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - FIVE-YEAR REVIEW REPORT

MEETING DATE: July 10, 2018

AGENDA ITEM: F-5

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: ARIZONA CRIMINAL JUSTICE COMMISSION (F-18-0706)
Title 10, Chapter 4, Article 1, Crime Victim Compensation Program

COMMENTS ON THE FIVE-YEAR REVIEW REPORT

Purpose of the Agency and Number of Rules in the Report:

In 1982, the Arizona State Legislature created the Crime Victim Compensation and Assistance Fund under A.R.S. § 41-2407 and directed the Criminal Justice Commission (Commission) to administer the fund. The Commission created the Crime Victim Compensation program and the Crime Victim Assistance program to award funds to public and private agencies for distribution to victims of criminally injurious conduct. The Commission staff provides grant monitoring, reporting, and program oversight and conducts financial and program reviews of agencies that receive crime victim funding.

This five-year review report from the Commission covers two rules, Sections 105 and 111, in A.A.C. Title 10, Chapter 4, Article 1 related to the Crime Victim Compensation program. A rescheduling request was granted on the remaining nine rules in the Article since the Council approved substantial amendments to those rules on February 6, 2018. Sections 105 and 111 were last amended in February 2013.

Proposed Action

After a thorough review of the rules during the rulemaking approved by the Council earlier this year, the Commission determines that no amendments are necessary for Sections 105 and 111.

1. Has the agency analyzed whether the rules are authorized by statute?

Yes. The Commission cites to A.R.S. § 41-2405(A)(8) as general authority for the rules, under which the Commission has the authority to adopt rules for "the purpose of allocating fund

monies as provided in sections...41-2407 that are consistent with the purposes set forth in those sections and that promote effective and efficient use of the monies.”

As for specific authority, the Commission cites to A.R.S. § 41-2407, which establishes the victim compensation and assistance fund, as well as requires the Commission to administer the fund.

2. Summary of the agency’s economic impact comparison and identification of stakeholders:

The Commission indicates that the rules have minimal economic impact because the rules do not directly affect any businesses.

Key stakeholders are the Commission and crime victims. Any costs associated with the rules are borne exclusively by the Commission through dedicated program fund sources.

3. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

Yes. The Commission determines that the benefits of the rules greatly outweigh the costs. Any entity that applies under the rules for a grant from the Crime Victim Compensation and Assistance Fund does so voluntarily after determining that the benefits of receiving the grant outweighs the cost of completing the application and submitting any required reports.

4. Has the agency received any written criticisms of the rules over the last five years?

No. The Commission indicates that it has not received any written criticisms of the rules over the last five years.

5. Has the agency analyzed the rules’ clarity, conciseness, and understandability, consistency with other rules and statutes, and effectiveness?

Yes. The Commission indicates that the rules are effective in achieving their objectives, consistent with other rules and statutes, and clear, concise, and understandable.

6. Has the agency analyzed the current enforcement status of the rules?

Yes. The Commission indicates that the rules are enforced as written.

7. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The Commission indicates that the rules are not more stringent than federal law. The Victims of Crime Act (VOCA) of 1984 establishes the Federal Crime Victims Fund. Arizona

receives funding for its Crime Victim Compensation program under VOCA because it meets the necessary criteria.

8. For rules adopted after July 29, 2010, do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

No. The rules do not require a permit or license.

9. Conclusion

The Commission proposes no action on the rules. The report meets the requirements of A.R.S. § 41-1056 and R1-6-301. Council staff recommends approval of this report.



Arizona Criminal Justice Commission

Chairperson
SHEILA POLK
Yavapai County Attorney

Vice Chairperson
JOE R. BRUGMAN, Chief
Safford Police Department

MARK BRNOVICH
Attorney General

DAVID K. BYERS, Director
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KELLY "KC" CLARK
Navajo County Sheriff

DAVE COLE
Former Judge

SEAN DUGGAN, Chief
Chandler Police Department

BARBARA LAWALL
Pima County Attorney

GREG MENGARELLI, Mayor
City of Prescott

FRANK MILSTEAD, Director
Agency of Public Safety

BILL MONTGOMERY
Maricopa County Attorney

MARK NAPIER
Pima County Sheriff

PAUL PENZONE
Maricopa County Sheriff

CHARLES RYAN, Director
Agency of Corrections

DAVID SANDERS
Pima County Chief Probation Officer

DANIEL SHARP, Chief
Oro Valley Police Department

STEVE STAHL
Law Enforcement Leader

STEVE WILLIAMS
Navajo County Supervisor

C.T. WRIGHT, Chairperson
Board of Executive Clemency

Executive Director
Andrew T. LeFevre

1110 West Washington, Suite 230
Phoenix, Arizona 85007
PHONE: (602) 364-1146

May 15, 2018

Ms. Nicole Ong Colyer, Chair
The Governor's Regulatory Review Council
100 N. 15th Ave., #305
Phoenix, AZ 85007

**Re: A.A.C. Title 10. Law
Chapter 4. Arizona Criminal Justice Commission**

Dear Ms. Ong Colyer:

The included five-year rule report is submitted for review and approval by the Council. The following information is provided for Council's use in reviewing the report:

1. Person to contact for information regarding the report:

Name: Larry Grubbs, Program Manager
Address: Arizona Criminal Justice Commission
1110 W. Washington St., Ste. 230
Phoenix, AZ 85007
Telephone: (602) 364-1154
Fax: (602) 364-1175
E-mail: lgrubbs@azcjc.gov
Web site: www.azcjc.gov

2. All rules under Chapter 4, Articles 1 and 2, have been reviewed as part of a rulemaking process that concluded April 6, 2018. It is not the intent of the Commission that any rule will expire under A.R.S. § 41-1056(J).
3. The Council has not rescheduled the review of any article under this chapter under A.R.S. § 41-1056(H).
4. The Commission certifies that the agency is in compliance with A.R.S. § 41-1091.

Sincerely,

Our mission is to continuously address, improve, sustain and enhance public safety in the State of Arizona through the coordination, cohesiveness, and effectiveness of the Criminal Justice System

FAX:(602) 364-1175
www.azcjc.gov

A handwritten signature in black ink, appearing to read "Andrew T. LeFevre". The signature is fluid and cursive, with a large initial "A" and "L".

Andrew T. LeFevre
Executive Director

ARIZONA CRIMINAL JUSTICE COMMISSION
CRIME VICTIM COMPENSATION AND ASSISTANCE FUND PROGRAMS
 10 A.A.C. 4, Article 1
 May 2018

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. § 41-2405(A)(8)

Specific Statutory Authority: R10-4-105 and R10-4-111 are specifically authorized by A.R.S. § 41-2407 and 41-2405(A)(8)

2. The objective of each rule:

Rule	Objective
R10-4-105	Crime Victim Compensation Board: The purpose for the existence of the rule is to describe the requirements for establishing a county-level crime victim compensation board, defining the board member appointment process, setting the term of board member service, describing board member training and attendance requirements, and generally outlining the programmatic responsibilities of the victim compensation board.
R10-4-111	Emergency Compensation Award: The purpose for the existence of the rule is to establish the availability of an emergency compensation award, the eligibility requirements for receiving an emergency award, and limits on how much can be paid to a claimant through an emergency award.

3. Are the rules effective in achieving their objectives? Yes X No

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation

4. Are the rules consistent with other rules and statutes? Yes X No

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. Are the rules enforced as written? Yes X No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency's proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No

If yes, please fill out the table below:

Commenter	Comment	Agency's Response

8. **Economic, small business, and consumer impact comparison:**

When the rules were made or substantially amended in 2012, the Commission correctly estimated that they would have minimal economic impact. The Commission was correct in anticipating that there was no economic impact to businesses regardless of size, because no businesses were directly affected by the rulemaking. Administrative workload and associated costs to ACJC have been significantly lower than anticipated because the estimated demand for state-level compensation claim reviews was higher than actual demand. As anticipated, the rulemaking did not result in the addition of any full or part time employees, and the rulemaking had no impact on state revenues.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes No

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

The rules were newly made or substantially amended in a rulemaking that was effective on February 4, 2012. These rules have not previously been the subject of a 5YRR.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The benefits of the rules greatly outweigh their minimal costs. No person is regulated by these rules. Any entity that applies under the rules for a grant of monies from the Crime Victim Compensation and Assistance Fund does so voluntarily after determining that the benefit of receiving grant monies outweighs the cost of making application and submitting required reports. An application and periodic reports are necessary to enable the Commission to evaluate proposed projects and ensure that all potential grant recipients are treated fairly and awarded funding is spent in compliance with program rules. Reports are necessary to ensure that Fund monies are properly spent and to enable the Commission to submit reports required of it.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No X

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

The applicable federal statute is the Victims of Crime Act of 1984, as amended, 42 U.S.C. 10601, et seq., referred to as VOCA.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

The rules do not require issuance of a regulatory permit, license or agency authorization. As such, compliance with A.R.S. § 41-1037 is not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Commission has determined through a recent rulemaking process that concluded April 6, 2018, that no action is necessary for the rules that are the subject of this report.

TITLE 10. LAW

CHAPTER 4. ARIZONA CRIMINAL JUSTICE COMMISSION

ARTICLE 1. CRIME VICTIM COMPENSATION PROGRAM

- R10-4-101.** Definitions
- R10-4-102.** Administration of the Fund
- R10-4-103.** Statewide Operation
- R10-4-104.** Operational Unit Requirements
- R10-4-106.** Prerequisites for a Compensation Award
- R10-4-107.** Submitting a Claim
- R10-4-108.** Compensation Award Criteria
- R10-4-109.** Hearing; Request for Rehearing
- R10-4-110.** State-level Claim Review

ARTICLE 2. CRIME VICTIM ASSISTANCE PROGRAM

- R10-4-201.** Definitions
- R10-4-202.** Administration of the Fund
- R10-4-203.** Grant Eligibility Requirements
- R10-4-204.** Services

ARTICLE 1. CRIME VICTIM COMPENSATION PROGRAM

R10-4-101. Definitions

In this Article:

1. “Board” means the Crime Victim Compensation Board of an operational unit.
2. “Claim” means an application for compensation submitted under this Article.
3. “Claimant” means a natural person who files a claim.
4. “Collateral source” means a source of compensation for economic loss that a claimant received or is accessible to and obtainable by the claimant or that is payable to or on behalf of the victim. Collateral source includes the following sources of compensation:
 - a. The perpetrator or a third party responsible for the perpetrator’s actions;
 - b. The United States government or any of its agencies, a state or any of its political subdivisions, or an instrumentality of two or more states, unless:
 - i. The law providing for the compensation makes the compensation excess or secondary to benefits under this Article, or

- ii. The compensation is made with federal funds granted under 42 U.S.C. 10602;
 - c. Social Security, Medicare, or Arizona Health Care Cost Containment System payments;
 - d. State-required, insurance for a temporary, non-occupational disability;
 - e. Worker's compensation insurance;
 - f. Wage continuation program of any employer;
 - g. Insurance proceeds payable to cover a specific compensable cost due to criminally injurious conduct ;
 - h. A contract providing for prepaid hospital and other health care services or disability benefits; and
 - i. A gift, devise, or bequest to cover a specific compensable cost.
5. "Commission" means the Arizona Criminal Justice Commission, as established by A.R.S. § 41-2404.
 6. "Compensable cost" means an economic loss for which a compensation award is allowed under this Article.
 7. "Compensation award" means a payment made to a claimant under the standards at R10-4-108.
 8. "Crime scene cleanup expense" means the reasonable and customary cost for:
 - a. Removing or attempting to remove bodily fluids, dirt, stains, and other debris that result from criminally injurious conduct occurring within a residence or the surrounding curtilage;
 - b. Repairing or replacing exterior doors, locks, or windows damaged as a direct result of criminally injurious conduct occurring within a residence or the surrounding curtilage.
 9. "Criminally injurious conduct" means conduct that:
 - a. Constitutes a crime as defined by state or federal law regardless of whether the perpetrator of the conduct is apprehended, charged, or convicted;
 - b. Poses a substantial threat of physical injury, mental distress, or death; and
 - c. Is punishable by fine, imprisonment, or death, or would be punishable but the perpetrator of the conduct lacked the capacity to commit the crime under applicable laws.
 10. "Derivative victim" means:
 - a. The spouse, child, parent, stepparent, stepchild, sibling, grandparent, grandchild, or guardian of a victim who died as a result of criminally injurious conduct ;
 - b. A child born to a victim after the victim's death;
 - c. A person living in the household of a victim who died as a result of criminally injurious conduct , in a relationship determined by the Board to be substantially similar to a relationship listed in subsection (10)(a);
 - d. A member of the victim's family who witnessed the criminally injurious conduct or who discovered the scene of the criminally injurious conduct ;
 - e. A natural person who is not related to the victim but who witnessed the criminally injurious conduct or discovered the scene of the criminally injurious conduct ; or
 - f. A natural person whose own mental health counseling and care or presence during the victim's mental health counseling and care is recommended for the successful treatment of the victim.
 11. "Durable medical equipment" means an appliance, apparatus, device, or product that:
 - a. Is medically necessary to treat an injury or condition resulting from criminally injurious conduct ;
 - b. Improves the function of an injured body part or delays deterioration of a patient's physical condition;

- c. Is primarily and customarily used to serve a medical purpose rather than primarily for transportation, comfort, or convenience; and
 - d. Provides the medically appropriate level of performance and quality for the medical injury or condition present.
12. "Economic loss" means financial detriment resulting from medical expense, mental health counseling and care expense, crime scene cleanup expense, funeral expense, or work loss.
 13. "Fund" means all State, Federal, and jurisdiction financial resources dedicated to the compensation program through statute, this chapter, or federal grant award.
 14. "Funeral expense" means a reasonable and customary cost, such as those listed on the Statement of Funeral Goods and Services Selected required under A.A.C. R4-12-307, incurred as a direct result of a victim's funeral, cremation, Native American ceremony, or burial.
 15. "Good cause" means a reason that the Board determines is substantial enough to afford a legal excuse.
 16. "Inactive claim" means a claim for which no compensation award is made for 12 consecutive months.
 17. "Incident of criminally injurious conduct" means all criminal actions that are related to or dependent upon each other regardless of the time involved in perpetrating the actions, number of persons perpetrating the actions, or the number of crimes with which the perpetrator is or could be charged.
 18. "Jurisdiction" means any county in this state.
 19. "Medical expense" means a reasonable and customary cost for medical care provided to a victim due to a physical injury, mental health condition, or medical condition that is a direct result of criminally injurious conduct .
 20. "Mental distress" means a substantial disorder of emotional processes, thought, or cognition that impairs judgment, behavior, or ability to cope with the ordinary demands of life.
 21. "Mental health counseling and care expense" means a reasonable and customary cost to assess, diagnose, and treat a victim's or derivative victim's mental distress resulting from criminally injurious conduct .
 22. "Minimum wage standard" means the uniform minimum wage payable in Arizona under federal or state law, whichever is greater.
 23. "Operational unit" means a public or private agency authorized by the Commission to receive, evaluate, and present to the Board a claim.
 24. "Program" means the Crime Victim Compensation Program.
 25. "Proximate cause" means an event sufficiently related to criminally injurious conduct to be held the cause of the criminally injurious conduct .
 26. "Reasonable and customary" means the normal charge within a specific geographic area for a specific service by a provider of a particular level of experience or expertise.
 27. "Resident" means a natural person who is domiciled in Arizona or is in Arizona for other than a temporary or transitory purpose.
 28. "Subrogation" means the substitution of the state or an operational unit in place of a claimant to enforce a lawful claim against a collateral source to recover any part of a compensation award made to the claimant using funds of the state or operational unit.

29. "Total and permanent disability" means a physical or mental condition that the Board finds is a proximate result of criminally injurious conduct and:
 - a. Produces a significant and sustained reduction in the victim's former mental or physical abilities dramatically altering the victim's ability to interact with others and carry on normal functions of life;
 - b. Lessens the victim's ability to work to a material degree; or
 - c. Causes a physical or neurophysical impairment from which no fundamental or marked improvement in the victim's crime-related condition can reasonably be expected.
30. "Transportation costs" means a travel expense that may be reimbursed to a claimant as follows:
 - a. Mileage, calculated at the rate established by:
 - i. The operational unit, or
 - ii. The state if the operational unit has not established a mileage rate;
 - b. Fare or fee expenses; and
 - c. Vehicle rental at the cost specified in the rental agreement.
31. "Victim" means a natural person who suffers a physical injury or medical condition, mental distress, or death as a direct result of:
 - a. Criminally injurious conduct,
 - b. The person's good faith effort to prevent criminally injurious conduct , or
 - d. c. The person's good faith effort to apprehend a person suspected of engaging in criminally injurious conduct .
32. "Work loss" means a reduction in income from:
 - a. Work that a victim or derivative victim would have performed if the victim had not been a victim; and
 - b. Social Security or Supplemental Security Income that a victim would have received or from which a derivative victim would have benefitted if the victim had not been killed.

R10-4-102. Administration of the Fund

- A.** The Commission shall include in the Fund all funds received for compensating a claimant under this Chapter.
- B.** The Commission shall designate one operational unit for a jurisdiction or jurisdictions to receive an allocation from the Fund each state fiscal year.
- C.** The Commission shall distribute a portion of the Fund to each operational unit for expenditure by the Board. The Commission shall distribute the funds using an allocation formula approved by the Commission.
- D.** The Commission shall reserve the lesser of \$50,000 or 10 percent of the Fund to be used in the event of an unforeseen increase of victimization that causes an operational unit for a particular jurisdiction to lack the funds needed to provide compensation.
- E.** If there is an unforeseen increase in victimization in a particular jurisdiction, the Commission shall designate an additional operational unit to accept claims from that jurisdiction or make a compensation award based on the criteria established by R10-4-108.

- F. If, at the end of a fiscal year, an operational unit has unexpended funds received from the Commission, the operational unit shall return the funds to the Commission within 90 days after the end of the fiscal year. The Commission shall deposit the returned funds in the Fund for use in the next fiscal year.
- G. Funds collected by an operational unit through subrogation or restitution may be retained by the operational unit to the extent authorized by the Commission and shall be used to pay compensation awards based on the criteria established by R10-4-108.
- H. An operational unit shall use funds to pay administrative costs only to the extent authorized by the Commission.
- I. An operational unit shall pay approved compensation program benefit expenses using benefit category cost rate schedules approved by the Commission. If the Commission has not approved a cost rate schedule for a benefit category, or if an eligible benefit cost is not covered by the approved rate schedule, the operational unit may negotiate a reasonable and customary cost with the service provider for the approved benefit expense.

R10-4-103. Statewide Operation

For any jurisdiction not served by an operational unit, the Commission shall operate a program in accordance with this Article, designate another operational unit as described in R10-4-104, or provide for a program by contract.

R10-4-104. Operational Unit Requirements

- A. To be designated by the Commission as an operational unit for a jurisdiction, a public or private agency shall submit to the Commission a written request for designation.
- B. The Commission shall designate a public or private agency as the operational unit for a jurisdiction or jurisdictions:
 1. Only if the public or private agency agrees not to:
 - a. Use Commission funds or federal funds to supplant funds otherwise available to compensate a victim or claimant;
 - b. Make a distinction between a resident and a non-resident in evaluating a claim; and
 - c. Make a distinction in evaluating a claim relating to a federal crime that occurs in Arizona and one relating to a state crime; and
 2. Only if the public or private agency agrees to:
 - a. Forward to the Board a claim relating to an incident of criminally injurious conduct occurring in the public or private agency's jurisdiction or jurisdictions;
 - b. Forward to the Board a claim made by or on behalf of a resident of the public or private agency's jurisdiction or jurisdictions who is a victim or derivative victim of an incident of criminally injurious conduct occurring in another state, the District of Columbia, Puerto Rico, or any other possession or territory of the United States that does not have a crime victim compensation program that meets the requirements of 42 U.S.C. 10602(b);
 - c. Forward to the Board a claim made by or on behalf of a resident of the public or private agency's jurisdiction or jurisdictions who is a victim or derivative victim of an incident of criminally injurious conduct occurring outside of the United States in an area without an accessible crime compensation program;

- d. Notify the Commission of any change in the public or private agency's program procedures or program policies before the change takes effect and if the change is material, obtain written approval from the Commission before instituting the change;
 - e. Submit financial and program activity reports to the Commission, in a format required by the Commission, and at a frequency established annually by the Commission;
 - f. Provide an application form to a claimant;
 - g. Comply with all civil rights requirements;
 - h. Ensure that each claim is investigated and substantiated before forwarding the claim to the Board for a compensation award; and
 - i. Monitor a compensation award to ensure that amounts paid are consistent with this Article.
- C. If more than one agency requests to be designated by the Commission as an operational unit for a jurisdiction, the Commission shall designate the agency that it determines is better able to evaluate claims and manage the expenditure of public funds. The Commission shall give preference to a public agency if both a public and private agency request designation.

R10-4-106. Prerequisites for a Compensation Award

- A. The Board shall make a compensation award only if it determines that:
- 1. Criminally injurious conduct :
 - a. Occurred in Arizona; or
 - b. Occurred outside of Arizona in an area without an accessible crime compensation program and affected a resident;
 - 2. The criminally injurious conduct directly resulted in the victim's physical injury, mental distress, medical condition, or death;
 - 3. The victim of the criminally injurious conduct or a person who submits a claim regarding criminally injurious conduct was not:
 - a. The perpetrator, an accomplice of the perpetrator, or a person who encouraged or in any way participated in or facilitated the criminally injurious conduct that is the subject of the claim;
 - b. At the time of the criminally injurious conduct that is the subject of the claim:
 - i. Serving a sentence of imprisonment in any detention facility, home arrest program, or work furlough; or
 - ii. Incarcerated in any detention facility awaiting criminal sentencing or disposition.
 - c. At the time of claim submission to the operational unit for a jurisdiction:
 - i. Escaped from serving a sentence of imprisonment in any detention facility, home arrest program, or work furlough;
 - ii. Convicted of a federal crime and delinquent in paying a fine, monetary penalty, or restitution imposed for the offense if the U.S. Attorney General and the Director of the Administrative Office of the U.S. Courts have issued a written determination that the entities administering federal victim compensation programs have access to an accurate and efficient criminal debt payment tracking system; or

- iii. Convicted of a state crime and delinquent in paying a fine, monetary penalty, or restitution imposed for the crime if the delinquency is identified by the Arizona Administrative Office of the Courts or the Clerk of the Superior Court.
 - d. Wanted in Arizona on an active warrant, if warrant status is discovered anytime following submission of the claim.
 - 4. The criminally injurious conduct was reported to an appropriate law enforcement authority within 72 hours after its discovery;
 - 5. The victim, derivative victim, or claimant cooperated with law enforcement agencies;
 - 6. The victim, derivative victim, or claimant incurred economic loss as a direct result of the criminally injurious conduct that is not compensable by a collateral source; and
 - 7. A claim, as described in R10-4-107, was submitted to the operational unit within two years after discovery of the criminally injurious conduct .
- B.** The Board shall extend the time limits under subsections (A)(4) and (A)(7) if the Board determines there is good cause for a delay.
- C.** If a victim died as a result of criminally injurious conduct , the requirements under subsections (A)(3)(c)(ii), (A)(3)(c)(iii), and (A)(3)(d) are waived for the deceased victim. Expenses incurred by the deceased victim and eligible claimants may be covered.
- D.** If the Board determines that a compensation award does not solely benefit a claimant who is delinquent under subsections (A)(3)(c)(ii) and (A)(3)(c)(iii), the requirements under subsections (A)(3)(c)(ii) and (A)(3)(c)(iii) may be waived for:
- 1. A claimant who is the parent or legal guardian of a minor victim of criminally injurious ; or
 - 2. A compensation award for expenses under R10-4-108(C)(3).

R10-4-107. Submitting a Claim

- A.** If the prerequisites in R10-4-106 are met, a natural person is eligible to submit a claim if the person is:
- 1. A victim;
 - 2. A derivative victim;
 - 3. A person authorized to act on behalf of a victim or a deceased victim’s dependent; or
 - 4. A person who assumed an obligation for or paid an expense directly related to a victim’s economic loss.
- B.** If a person is eligible under subsection (A) to submit a claim regarding more than one incident of criminally injurious conduct , the person shall submit a separate claim regarding each incident of criminally injurious conduct .
- C.** If more than one person is eligible under subsection (A) to submit a claim regarding an incident of criminally injurious conduct , each person shall submit a separate claim.
- D.** To apply for a compensation award, a person who is eligible under subsection (A) shall submit a claim, using a form that is available from the Commission, to the operational unit for the jurisdiction in which the incident of criminally injurious conduct occurred or to the operational unit for the jurisdiction in which a victim lives if the incident of criminally

injurious conduct occurred in an area without an accessible victim compensation program. The claimant shall provide the following:

1. About the victim:
 - a. Full name,
 - b. Residential address,
 - c. Gender,
 - d. Date of birth,
 - e. Residential and work telephone numbers,
 - f. Statement of whether the victim is deceased,
 - g. Ethnicity,
 - h. Statement of whether the victim is a resident, and
 - i. Statement of whether the victim is disabled;
2. About the claimant if the claimant is not the victim:
 - a. Full name;
 - b. Residential address;
 - c. Gender;
 - d. Date of birth;
 - e. Residential and work telephone numbers;
 - f. Relationship to the victim; and
 - g. If there are multiple victims or derivative victims of an incident of criminally injurious conduct, the name, residential address, and date of birth of each, and for derivative victims, the relationship to the victim;
3. About the crime:
 - a. Type of crime;
 - b. Statement of whether the crime was related to domestic violence;
 - c. Statement of whether the crime was a federal crime;
 - d. Date on which crime was committed;
 - e. Date on which crime was reported to law enforcement authorities;
 - f. Name of law enforcement agency to which the crime was reported;
 - g. Name of law enforcement officer to whom the crime was reported;
 - h. Law enforcement report number;
 - i. Location of crime;
 - j. Name of perpetrator, if known; and
 - k. Brief description of the crime and resulting injuries;
4. About a civil lawsuit:
 - a. Statement of whether the claimant has or will file a civil lawsuit related to the crime; and
 - b. If the answer to subsection (D)(4)(a) is yes, the name, address, and telephone number of the claimant's attorney;
5. About benefits from collateral sources:

- a. List of the benefits the claimant has received since the incident of criminally injurious conduct or is entitled to receive; and
 - b. For each benefit identified:
 - i. Type of benefit,
 - ii. Contact address and telephone number; and
 - iii. Claimant's identification or policy number;
6. About the economic loss for which compensation is requested:
- a. Medical expenses. A statement of whether the claim includes medical expenses and if so, the name, address, telephone number, account number, and date of service for each provider;
 - b. Mental health counseling and care expenses. A statement of whether the claim includes mental health counseling and care expenses and if so, the name, address, telephone number, account number, and date of service for each provider;
 - c. Work loss expenses. A statement of whether the claim includes work loss expenses and if so, the date on which the claimant was first unable to work, date on which the claimant returned to work, total time lost from work, hourly rate of pay, number of hours worked each week, number of hours worked each day, name, address, and telephone number of employer, and name of supervisor;
 - d. Funeral expenses. A statement of whether the claim includes funeral expenses and if so, the name, address, and telephone number of the provider and the amount paid; and
 - e. Crime scene cleanup expenses. A statement of whether the claim includes crime scene cleanup expenses and if so, the name, address, and telephone number of the provider and the amount paid;
 - f. Transportation costs. A statement of whether the claim includes transportation costs and if so, the reason for travel as listed under R10-4-108(C)(6) and if mileage is claimed, the date and mileage of each trip; and
7. The claimant's dated signature:
- a. Certifying that the claimant is eligible to submit a claim and that the information provided is true and correct to the best of the claimant's knowledge;
 - b. Subrogating to the state and operational unit the claimant's right to receive benefits from a collateral source;
 - c. Authorizing the release of confidential information necessary to administer the claim; and
 - d. Authorizing the release to the Program of protected health information that relates to care provided as a result of the criminally injurious conduct and is necessary to verify the claim.
- E.** A claimant shall submit the following in addition to the claim form submitted under subsection (D):
1. A copy of all bills, contracts, receipts, and insurance statements relating to each expense claimed under subsection (D)(6);
 2. If work loss expenses are claimed, a signed statement on official letterhead:
 - a. From the claimant's employer verifying the information provided under subsection (D)(6)(c); and
 - b. If applicable, from the physician or mental health care provider indicating the claimant:
 - i. Was unable to work as a result of being a victim or derivative victim, the length of time the claimant was unable to work, and the date on which the claimant was or will be able to return to work; or

- ii. Is totally and permanently disabled. 3. Any documentation required by the operational unit to fully investigate and substantiate claimant eligibility and all claim expense requests.

R10-4-108. Compensation Award Criteria

- A. The Board shall meet at least every 60 days to decide, based on the findings made by the operational unit, the eligibility of the claimant, whether to make a compensation award, and the terms and amount of any compensation award. The Board shall make a decision within 60 days after the operational unit receives a complete and actionable claim under R10-4-107 unless good cause for delay exists. The Board shall inform the claimant in writing within 10 business days of the Board's decision.
- B. The Board shall not make a compensation award unless it determines that the prerequisites in R10-4-106 are met.
- C. The Board shall make a compensation award only for the following:
 - 1. Reasonable and customary medical expenses due to the victim's physical injury, medical condition, mental health condition, or death.
 - a. The Board shall include the following as a medical expense:
 - i. Repair of damage to a victim's prosthetic device, eyeglasses or other corrective lenses, or a dental device; and
 - ii. Durable medical equipment required for treatment of the victim.
 - b. The Board shall not include as a medical expense :
 - i. A charge for a private room in a hospital, clinic, convalescent home, nursing care facility, or other institution that provides medical services unless the Board determines that the private room is medically necessary; and
 - ii. Any drug, substance, or chemical included under Schedule I of the Federal Controlled Substances Act 21 U.S.C. §812(c).
 - 2. Reasonable and customary work loss expenses for:
 - a. A victim whose ability to work is reduced due to physical injury, mental distress, or medical condition resulting from the criminally injurious conduct ;
 - b. A victim or derivative victim to:
 - i. Make a medical or mental health counseling and care visit; or
 - ii. Attend a criminal court proceeding, clemency hearing, parole hearing, or execution directly related to the criminally injurious conduct.
 - c. A derivative victim listed in R10-4-101(10)(a) through (c) if the Board determines the death resulted in a loss of support from the victim to the derivative victim;
 - d. A parent or guardian of a minor victim to transport or accompany the minor victim to:
 - i. A medical or mental health counseling and care visit; or
 - ii. A criminal court proceeding, clemency hearing, parole hearing, or execution directly related to the criminally injurious conduct.

- e. A derivative victim to make funeral arrangements for a deceased victim, or tend to the affairs of a deceased victim ; or
 - f. A family member or guardian or a person living in the victim’s household in a relationship similar to those listed in R10-4-101(10)(a) to provide non-skilled nursing care for the victim that is medically necessary as a result of the criminally injurious conduct ;
3. Reasonable and customary funeral expenses. Personal attendee expenses for clothing, travel, lodging, food, or per diem to attend a victim’s funeral, Native American ceremony, or burial are not reasonable and customary funeral expenses and shall not be included in a claim for a compensation award;
 4. Reasonable and customary mental health counseling and care expenses due to a victim’s or derivative victim’s mental distress resulting from the criminally injurious conduct if:
 - a. The mental health counseling and care is provided by an individual who:
 - i. Is licensed for independent practice by the Board of Behavioral Health Examiners,
 - ii. Is a behavioral health professional as defined at A.A.C. R9-20-101, or
 - iii. Is authorized to perform mental health counseling and care by the laws of a federally recognized tribe; and
 - b. The mental health counseling and care expenses do not include a charge for a private room in a hospital, clinic, convalescent home, nursing care facility, or any other institution that provides medical services unless the Board determines that the private room is medically necessary;
 5. Reasonable and customary crime scene cleanup expenses due to a victim’s homicide, aggravated assault, or sexual assault; and
 6. Reasonable and customary transportation costs related to:
 - a. Obtaining medical care as defined in subsection (C)(1),
 - b. Obtaining mental health counseling and care as defined in subsection (C)(4),
 - c. A victim or derivative victim attending a criminal court proceeding, clemency hearing, parole hearing, or execution directly related to the incident of criminally injurious conduct ,
 - d. The victim obtaining a medical forensic examination or participating in a medical forensic interview, and
 - e. Responding to a substantiated threat to the safety or well-being of the victim or a derivative victim listed in R10-4-101(10)(d).

D. The Board shall not make a compensation award to a claimant that exceeds:

1. Twenty-five thousand dollars for all economic loss submitted under a claim as a result of an incident of criminally injurious conduct ;
2. The amount available to the operational unit and not committed to other compensation awards at the time the Board makes the compensation award determination;
3. For medical expenses for a victim, the maximum amount specified in subsections (D)(1) and (D)(2).
4. For work loss expenses:
 - a. Work loss expenses under subsections (C)(2)(a), (C)(2)(b), (C)(2)(d), (C)(2)(e), and (C)(2)(f), are limited to an amount per calendar week equal to 40 hours at the current minimum wage and the maximum amount specified in subsections (D)(1) and (D)(2),

- b. Loss of support under subsection (C)(2)(c) may be awarded to the maximum allowed under subsections (D)(1) and (D)(2) in a lump sum or periodic payments;
 - 5. For mental health counseling and care expenses, \$5,000 per victim or derivative victim;
 - 6. For funeral expenses, \$10,000;
 - 7. For crime scene cleanup expenses, \$2,000 for cleanup provided by a professional service, of which \$500 may be for crime scene cleanup not provided by a professional service to include only repair or cleanup material costs for one-time use items; and
 - 8. For transportation costs, \$2,000 per victim or derivative victim paid as reimbursement of actual transportation expenses.
- E.** If the Board determines a victim is totally and permanently disabled, the Board may expedite a compensation award for the victim. The Board shall determine the amount of the expedited compensation award to the maximum allowed under subsection (D) and determine whether to provide the amount awarded in a lump sum or periodic payments.
- F.** The Board shall deny or reduce a compensation award to a claimant if:
- 1. The victim or claimant has recouped or is eligible to recoup the economic loss from an obtainable and accessible collateral source, including benefits from a federal or federally financed program, ;
 - 2. The Board determines that the victim or claimant earned income from substitute work or unreasonably failed to perform available substitute work; or
 - 3. The Board determines that the incident of criminally injurious conduct that is the subject of the claim was due in substantial part to the victim's:
 - a. Negligence,
 - b. Intentional unlawful conduct that was the proximate cause of the incident of criminally injurious conduct , or
 - c. Conduct intended to provoke or aggravate that was the proximate cause of the incident of criminally injurious conduct .
- G.** The Board shall deny or reduce a compensation award under subsection (F)(3) in proportion to the degree to which the Board determines the victim is responsible for the incident of criminally injurious conduct that is the subject of the claim.
- H.** The Board shall deny a compensation award to a claimant if:
- 1. The Board determines that the victim or claimant did not cooperate fully with the appropriate law enforcement agency and the failure to cooperate fully was not due to a substantial medical, mental health, or safety risk. The Board shall use the following criteria to determine whether failure to cooperate fully with law enforcement warrants that a claim be denied:
 - a. The victim or claimant failed to assist in the prosecution of a person who engaged in the criminally injurious conduct or failed to appear as a witness for the prosecution;
 - b. The victim or claimant delayed assisting in the prosecution of a suspect and as a result, the suspect of the criminally injurious conduct escaped prosecution or the prosecution of the suspect was negatively affected; or

- c. A law enforcement authority indicates to the Board that the victim or claimant delayed giving information pertaining to the criminally injurious conduct , failed to appear when requested without good cause, gave false or misleading information, or attempted to avoid law enforcement authorities .
- 2. The Board determines that the victim or claimant knowingly made a false or misleading statement on the claim or in writing on supporting documents submitted to the Board or operational unit.
- I. If there are insufficient funds to make a compensation award, the Board may;
 - 1. Deny the claim,
 - 2. Make a partial award and reconsider the claim later during the fiscal year, or
 - 3. Extend the claim into a subsequent fiscal year.
- J. The Board shall not make a compensation award to pay attorney’s fees incurred by a victim or claimant.
- K. The operational unit, in its discretion, may pay a compensation award directly to a claimant or to a provider.

R10-4-109. Hearing; Request for Rehearing

- A. If the prerequisites in R10-4-106 are met, the Board shall conduct a hearing regarding a claim submitted under this Article.
- B. The Board shall provide a claimant with at least 10 business days’ notice of a hearing or rehearing.
- C. The Board shall provide written notice of its decision to the claimant within 10 business days after a hearing or rehearing.
- D. The Board shall serve notice of a compensation-award denial or reduction by personal delivery or certified mail to the last known residence or place of business of the person being served. Service is complete upon personal delivery or five days after mailing by certified mail.
- E. The operational unit may request a rehearing of a decision by the Board at any time and for any reason under this Article.
- F. A claimant who is aggrieved by a decision of the Board made at a hearing may request a rehearing of the decision within 30 days after the Board serves notice of the decision. A claimant shall request a rehearing in writing and specify the grounds for the request.
- G. A claimant may amend a request for a rehearing of a Board decision at any time before it is ruled on by the Board.
- H. The Board may require additional written explanation of an issue raised in a request for rehearing of a Board decision and may provide for oral argument.
- I. The Board shall grant a rehearing for any of the following reasons materially affecting a claimant’s rights:
 - 1. Irregularity in the proceedings of the Board or its operational unit or any order or abuse of discretion that deprived the claimant of a fair Board decision;
 - 2. Misconduct of the Board, the operational unit, or staff of the operational unit;
 - 3. Newly discovered material evidence that could not, with reasonable diligence, have been discovered and produced at the original Board meeting;
 - 4. Error in the admission or rejection of evidence or other error of law occurring at the Board meeting; and
 - 5. The decision is not justified by the evidence or is contrary to law.

- J. When a rehearing is granted, the Board shall ensure that the rehearing covers only the matters specified under subsection (I) that materially affect a claimant's rights.
- K. The Board may affirm or modify a decision on all or part of the issues for any of the reasons listed in subsection (I). An order modifying a decision shall specify with particularity the grounds for the order.

R10-4-110. State-level Claim Review

- A. A claimant who is aggrieved by a decision of a Board made at a rehearing under R10-4-109 may request a state-level claim review of the decision within 30 calendar days after the Board serves notice of the decision. The claimant shall request a state-level claim review in writing, specify the grounds for the request, and submit the request directly to the Commission.
- B. The State Claim Review Panel shall serve as the decision-making body for state-level claim reviews. The State Claim Review Panel shall consist of the following members:
 - 1. The Arizona Criminal Justice Commission Crime Victim Services Program Manager,
 - 2. A representative of the Office of the Attorney General, and
 - 3. A Board chair from an operational unit that is not the operational unit that originally heard the claim being reviewed.
- C. The State Claim Review Panel shall meet as needed to hear claimant requests for a state-level claim review. The State Claim Review Panel shall complete a state-level claim review within 30 calendar days after receiving the written request required under subsection (A).
- D. A claimant may amend a request for a state-level claim review of a Board decision at any time before it is ruled on by the State Claim Review Panel.
- E. When a state-level claim review is granted, the State Claim Review Panel shall ensure that the review:
 - 1. Considers only evidence previously presented to the Board, and
 - 2. Decides only whether the Board's decision was consistent with the standards in this Article.
- F. The State Claim Review Panel may affirm or overturn a decision made by a Board.
- G. A decision by the State Claim Review Panel is final. If the Panel overturns a decision made by a Board related to:
 - 1. Eligibility, the operational unit where the claim originated shall proceed with any further action related to the claim;
or
 - 2. An economic loss, the operational unit where the claim originated shall pay the economic loss using compensation funds available to the operational unit.
- H. The State Claim Review Panel shall provide written notice of the Panel's decision to the claimant and the operational unit that originally heard the claim within 10 business days after the state-level claim review.

ARTICLE 2. CRIME VICTIM ASSISTANCE PROGRAM

R10-4-201. Definitions

In this Article:

1. "Commission" means the Arizona Criminal Justice Commission, established by A.R.S. § 41-2404.
2. "Crime" means conduct, completed or preparatory, committed in Arizona that is a misdemeanor or felony under state law regardless of whether the perpetrator of the conduct is convicted. Conduct arising out of owning, maintaining, or operating a motor vehicle, aircraft, or water vehicle is not a crime unless the person engaged in the conduct acts intentionally, knowingly, recklessly, or with criminal negligence, to cause physical injury, threat of physical injury, or death.
3. "Financial support from other sources" means that at least one-fifth of the budget for a victim assistance program is from sources, including in-kind contributions, other than the Fund.
4. "Fund" means the Victim Compensation and Assistance Fund established by A.R.S. § 41-2407.
5. "Immediate family" means spouse, child, stepchild, parent, stepparent, sibling, stepbrother, stepsister, grandparent, grandchild, or guardian.
6. "In-kind contribution" means a non-cash source of program support to which a cash value can be given.
7. "Subrogation" means the substitution of the state or a victim assistance program in the place of a victim to enforce a lawful claim against a third party to recover the cost of services to the victim paid for with financial support from the Fund or other sources.
8. "Victim" means a natural person against whom a crime is perpetrated and the victim's immediate family.

R10-4-202. Administration of the Fund

- A. The Commission shall deposit in the Fund all funds received for victim assistance under this Chapter.
- B. The Commission shall make distributions from the Fund through a competitive grant process that complies with A.R.S. § 41-2701 et seq. and ensures statewide distribution when possible and effective and efficient use of the funds.
- C. At least six weeks before an application for a grant from the Fund is due, the Commission shall make a grant application form and instructions available on its web site, which is www.azcjc.gov.
- D. To apply for a grant from the Fund, an authorized official of a public agency or private nonprofit organization that operates a program that meets the standards in R10-4-203 shall complete and submit to the Commission the application form referenced in subsection (C).
- E. The Commission's grant period coincides with the state's fiscal year. If funds received from the Commission are unexpended at the end of the grant period, the public agency or private nonprofit organization that received the funds shall return them to the Commission within 30 days after receiving a written request from the Commission. The Commission shall redeposit the unexpended funds in the Fund for use in the next fiscal year.

R10-4-203. Grant Eligibility Requirements

- A. A public agency or private nonprofit organization may apply for and receive a grant from the Commission if, in addition to the other requirements in this Section, the public agency or private nonprofit organization operates a project that:
 1. Provides services described in R10-4-204 benefitting victims or addressing victimization;
 2. Does not use Commission funds or federal funds to supplant funds otherwise available to the project for victim assistance;

3. Uses volunteers effectively and efficiently to provide services;
 4. Promotes coordinated public and private efforts to assist victims or address victimization within the community served;
 5. Increases awareness of, and facilitates access to, available victim compensation benefits; and
 6. Complies with all applicable civil rights laws.
- B.** To receive a grant from the Commission, a public agency or private nonprofit organization that operates a project shall demonstrate to the Commission that the project:
1. Has financial support from other sources; and
 2. Has a history of providing effective services in accordance with section (A). The Commission shall determine whether the project's services are effective based on:
 - a. Evidence-based outcomes demonstrating project services are benefitting victims or addressing victimization, and
 - b. Whether data indicate program results are achieved in a cost-effective manner.
- C.** To receive a grant from the Commission, a public agency or private nonprofit organization shall agree to:
1. Submit to the Commission financial reports, on a form provided by the Commission, at a frequency established by the Commission, containing detailed expenditures of funds received from the Commission and matching funds;
 - 2. Report project activity to the Commission, on a form provided by the Commission, at a frequency established annually by the Commission.**

R10-4-204. Services

- A.** A public agency or private nonprofit organization that receives a grant from the Commission shall ensure that the funds are used to provide only the following victim services or services addressing victimization:
1. Crisis intervention services to meet the urgent emotional or physical needs of a victim ;
 2. Emergency services such as:
 - a. Temporary shelter or relocation for a victim who cannot safely remain in current lodgings;
 - b. Emergency financial assistance for immediate needs related to transportation, food, shelter, and other necessities; and
 - c. Temporary repairs to doors, locks, and windows damaged as a result of a crime to prevent further victimization;
 3. Support services, such as:
 - a. Assistance dealing with the effects of victimization;
 - b. Assistance dealing with other social services and criminal justice agencies;
 - c. Assistance in replacing, or obtaining the return of property kept as evidence;
 - d. Assistance in dealing with the victim's landlord or employer; and
 - e. Referral to other sources of assistance as needed;
 4. Court-related services, such as:
 - a. Direct services or financial assistance that helps a victim participate in criminal justice proceedings, such as child care, meals, and parking expenses; and

- b. Advocate services such as escorting a victim to criminal justice-related interviews, court proceedings, and assistance in accessing temporary protection services; and
 5. Notification services, such as those found in A.R.S Title 13, Chapter 40, Crime Victims' Rights.
- B.** A public agency or private nonprofit organization that receives a grant from the Commission may use the funds to :
 1. Provide training for paid or volunteer staff of agencies who provide services directly benefitting victims;
 2. Produce educational or outreach materials describing the services available, how to obtain program assistance, and volunteer opportunities ; and
 3. Provide training or services focused on preventing initial victimization or further victimization connected to violent crime.
- C.** A public agency or private nonprofit organization that receives a grant from the Commission shall ensure that funds are not used for the following:
 1. Broad crime prevention efforts, other than those aimed at providing specific services addressing victimization;
 2. General public relations programs;
 3. Advocacy for a particular legislative or administrative reform;
 4. General criminal justice agency improvement; or
 5. A project in which victims are not the primary beneficiaries, or a project not directly addressing victimization .

41-2405. Arizona criminal justice commission; powers and duties; staff

A. The Arizona criminal justice commission shall:

1. Monitor the progress and implementation of new and continuing criminal justice legislation.

2. Facilitate research among criminal justice agencies and maintain criminal justice system information.

3. Facilitate coordinated statewide efforts to improve criminal justice information and data sharing.

4. Prepare for the governor a biennial criminal justice system review report. The report shall contain:

(a) An analysis of all criminal justice programs created by the legislature in the preceding two years.

(b) An analysis of the effectiveness of the criminal code, with a discussion of any problems and recommendations for revisions if deemed necessary.

(c) A study of the level of activity in the several areas of the criminal justice system, with recommendations for redistribution of criminal justice revenues if deemed necessary.

(d) An overall review of the entire criminal justice system, including crime prevention, criminal apprehension, prosecution, court administration and incarceration at the state and local levels as well as funding needs for the system.

(e) Recommendations for constitutional, statutory and administrative revisions that are necessary to develop and maintain a cohesive and effective criminal justice system.

5. Provide supplemental reports on criminal justice issues of special timeliness.

6. In coordination with other governmental agencies, gather information on programs that are designed to effectuate community crime prevention and education using citizen participation and on programs for alcohol and drug abuse prevention, education and treatment and disseminate that information to the public, political subdivisions, law enforcement agencies and the legislature.

7. Make recommendations to the legislature and the governor regarding the purposes and formula for allocation of fund monies as provided in section 41-2401, subsection D and section 41-2402 through the biennial agency budget request.

8. Adopt rules for the purpose of allocating fund monies as provided in sections 41-2401, 41-2402 and 41-2407 that are consistent with the purposes set forth in those sections and that promote effective and efficient use of the monies.

9. Make reports to the governor and the legislature as they require.

10. Oversee the research, analyses, studies, reports and publication of crime and criminal justice statistics prepared by the Arizona statistical analysis center, which is an operating section of the Arizona criminal justice commission.

11. Prepare an annual report on law enforcement activities in this state that are funded by the drug and gang enforcement fund or the criminal justice enhancement fund and that relate to illicit drugs and drug related gang activity. The report shall be submitted by October 31 of each year to the governor, the president of the senate and the speaker of the house of representatives and a copy shall be submitted to the secretary of state. The report shall include:

(a) The name and a description of each law enforcement program dealing with illegal drug activity or street gang activity, or both.

(b) The objective and goals of each program.

(c) The source and amount of monies received by each program.

(d) The name of the agency or entity that administers each program.

(e) The effectiveness of each program.

12. Compile and disseminate information on best practices for cold case investigations, including effective victim communication procedures. For the purposes of this paragraph, "cold case" means a homicide or a felony sexual offense that remains unsolved for one year or more after being reported to a law enforcement agency and that has no viable and unexplored investigatory leads.

B. The Arizona criminal justice commission, as necessary to perform its functions, may:

1. Request any state or local criminal justice agency to submit any necessary information.

2. Form subcommittees, make studies, conduct inquiries and hold hearings.

3. Subject to chapter 4, article 4 of this title, employ consultants for special projects and such staff as deemed necessary or advisable to carry out this section.

4. Delegate its duties to carry out this section, including:

(a) The authority to enter into contracts and agreements on behalf of the commission.

(b) Subject to chapter 4, article 4 and, as applicable, articles 5 and 6 of this title, the authority to appoint, hire, terminate and discipline all personnel of the commission, including consultants.

5. Establish joint research and information facilities with governmental and private agencies.

6. Accept and expend public and private grants of monies, gifts and contributions and expend, distribute or allocate monies appropriated to the commission for the purpose of enhancing efforts to investigate or prosecute and adjudicate any crime and to implement this chapter.

41-2407. Victim compensation and assistance fund; subrogation; prohibited debt collection activity; definition

(L17, Ch. 125, sec 1 & ch. 229, sec. 18)

A. The victim compensation and assistance fund is established. The Arizona criminal justice commission shall administer the fund. The victim compensation and assistance fund shall consist of monies collected pursuant to section 12-116.01 and distributed pursuant to section 41-2401, subsection D, paragraph 14, monies collected pursuant to section 31-411, subsection E and sections 13-4311, 31-418, 31-467.06 and 41-1674, unclaimed victim restitution monies pursuant to sections 22-116 and 44-313 and monies available from any other source.

B. Subject to legislative appropriation, the Arizona criminal justice commission shall allocate monies in the victim compensation and assistance fund to public and private agencies for the purpose of establishing, maintaining and supporting programs that compensate and assist victims of crime.

C. The allocation of monies pursuant to this section shall be made in accordance with rules adopted by the Arizona criminal justice commission pursuant to section 41-2405, subsection A, paragraph 8. The rules shall provide that persons who suffered personal injury or death that resulted from an attempt to aid a public safety officer in the prevention of a crime or the apprehension of a criminal may be eligible for compensation.

D. This state and the applicable operational unit or qualified program, as defined in the victim compensation program rules, are subrogated to the rights of an individual who receives monies from the victim compensation and assistance fund to recover or receive monies or benefits from a third party, to the extent of the amount of monies the individual receives from the fund.

E. A licensed health care provider who agrees to the victim compensation program rules may receive program monies for providing health and medical services to a victim or claimant. A licensed health care provider who accepts the full allowable payment for those services from a victim compensation program funded pursuant to this section is deemed to have accepted the payment as the full payment for those services. The licensed health care provider may not collect or attempt to collect any payment for the same health and medical services from the victim or claimant, except that if a victim compensation program funded pursuant to this section is unable to pay the full allowable payment to a licensed health care provider because of a lack of available monies or for any other reason, the licensed health care provider may collect the unpaid balance for the services from the victim or claimant or from a third-party payor, and the total amount billed or requested by the licensed health care provider may not exceed the full allowable payment that the licensed health care provider agreed to accept from the victim compensation program for the services.

F. If a licensed health care provider receives notice that a person has filed a claim with a victim compensation program funded by this section, the licensed health care provider is prohibited from any debt collection activity for any monies owed by the person that are included in the filed claim until an award is made on the claim or until a determination is made that the claim is

noncompensable. For the purposes of this subsection, "debt collection activity" includes repeatedly telephoning or writing to the claimant and threatening to either turn the matter over to a debt collection agency or to an attorney for collection, enforcement or filing of any other debt collection process. Debt collection activity does not include routine billing or inquiries about the status of the claim.

G. For the purposes of this section, "licensed health care provider" means a person or institution that is licensed or certified by this state to provide health care services, medical services, nursing services, emergency medical services and ambulance services that are regulated pursuant to title 36, chapter 21.1, article 2 or other health-related services.

DEPARTMENT OF HEALTH SERVICES
Title 9, Chapter 10, Article 1, General

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - FIVE-YEAR REVIEW REPORT

MEETING DATE: July 10, 2018

AGENDA ITEM: F-6

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF HEALTH SERVICES (F-18-0705)
Title 9, Chapter 10, Article 1, General

COMMENTS ON THE FIVE-YEAR REVIEW REPORT

Purpose of the Agency and Number of Rules in the Report:

This five-year review report from the Arizona Department of Health Services (Department) covers 19 rules and one table in A.A.C. Title 9, Chapter 10, Article 1 related to licensing of health care institutions. The rules establish health care institution classes and subclasses; licensing exceptions; requirements for architectural plans and specifications; initial license application; fees; renewal license application; licensing time-frames; enforcement actions that can be taken by the Department; denial, revocation, or suspension of a license; requirements for tuberculosis screening; clinical practice restrictions for hemodialysis technician trainees; behavioral health paraprofessionals; nutrition and feeding assistant training programs; requirements for a collaborating health care institution; requirements for abortion reporting; and opioid prescribing and treatment.

The rules were last amended at various times between 2014 and 2018. This is the first five-year review report on the rules.

Proposed Action

The Department plans to amend the rules to implement statutory changes and address the issues identified in this memo, by submitting a Notice of Final Rulemaking to the Council by July 2019.

1. Has the agency analyzed whether the rules are authorized by statute?

Yes. The Department cites to A.R.S. §§ 36-132(A)(17) and 36-136(G) as general authority for the rules. A.R.S. § 36-132(A)(17) requires the Department to "license and regulate

health care institutions” and under A.R.S. § 36-136(G), the Department “may make and amend rules necessary for the proper administration and enforcement of the laws relating to the public health.”

The Department also provides specific statutory authority for the rules in the report. Of particular significance is A.R.S. § 36-405, which requires the Department to “adopt rules to establish minimum standards and requirements for the construction, modification, and licensure of health care institutions necessary to assure the public health, safety and welfare.”

2. Summary of the agency’s economic impact comparison and identification of stakeholders:

The Department currently licenses over 6,000 facilities as one of 20 classes/subclasses of health care institutions. As of May 1, 2018, these include:

- . 132 hospitals
- . 45 behavioral health facilities
- . 148 nursing care institutions
- 3 recovery centers
- 8 hospice inpatient facilities
- 201 outpatient surgical centers
- 2,214 outpatient treatment centers
- 1 behavioral health specialized transitional facility
- 4 abortion clinics
- 3 substance abuse transitional facilities
- 545 behavioral health residential facilities
- 40 unclassified health care institutions
- 148 hospice service agencies
- 219 home health agencies
- 287 assisted living centers
- 1,757 assisted living homes
- 61 adult foster care homes
- 221 adult day health care facilities
- 13 behavioral health respite homes
- 44 adult behavioral health therapeutic homes
- 253 counseling facilities

The Department has undertaken 1,660 enforcement actions in the past year, resulting in the suspension or revocation of 10 licenses, and \$743,664 in civil money penalties were assessed.

Stakeholders affected by the rules include the Department, health care institutions, medical practitioners, personnel members in licensed health care institutions, patients, their families, the general public, and the Arizona Health Care Cost Containment System (AHCCCS).

Additional stakeholders include architects, contractors, and engineers involved in the construction or modification of health care institutions.

3. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

Yes. The Department indicates that most of the requirements in Article 1 impose the least burden and costs to persons regulated by the rules. However, the Department believes that the burden of the rules will be further reduced after the issues identified in this report are addressed.

4. Has the agency received any written criticisms of the rules over the last five years?

No. The Department indicates that it has not received any written criticisms of the rules over the last five years.

5. Has the agency analyzed the rules' clarity, conciseness, and understandability, consistency with other rules and statutes, and effectiveness?

Yes. The Department indicates that the rules are effective with the following exceptions:

- Section 101: Definitions should be modified to update cross-references and correct grammatical errors.
- Section 102: Subsection (B) contains requirements for both the applicant and the Department, this subsection should be split into two separate subsections.
- Section 104: The rule should specify a time limit for keeping an application open before the application packet is considered withdrawn. The rule should also better reflect the types of services or modifications that require an architect to review architectural specifications and plans.
- Section 105: The rule should be amended to comply with statutory changes to the licensing requirements in A.R.S. Title 36, Chapter 4.
- Section 106: The fees in subsections (C)(3), (C)(6), (C)(7), and (D) should be modified to better reflect the Department's current costs. The fees have not been revised since they were first adopted in 2010.
- Section 107: The rule should be amended to comply with statutory changes to the licensing requirements in A.R.S. Title 36, Chapter 4.
- Section 108: Subsection (B) should specify a time limit for keeping an application for approval of architectural plans and specifications open before the application is considered withdrawn.
- Table 1.1: The table should be amended to comply with statutory changes.
- Section 109: The rule should be modified to specify circumstances in which the Department should be notified of a change.
- Section 110: The rule should be changed to include modifications such as requested change in authorized services.
- Section 112: Subsections (A)(2) and (3) should be amended to comply with statutory changes.

The Department also indicates that the following rules should be amended to remain consistent with other rules and statutes:

- Section 101: Cross-references in terms, “factory-built building” and “speech=language pathologist” should be updated.
- Sections 105, 107, 108, 112, and Table 1.1: The rules and table do not comply with statutory changes made to A.R.S. Title 36, Chapter 4, which established perpetual licenses.
- Section 109: Subsection (C)(1) contains outdated cross-references to R9-10-1603(A)(4) and R9-10-1803(A)(5).
- Section 110: In subsection (B)(4)(a), a reference to R9-10-412 should be changed to R9-1-412.
- Section 111: In subsection (A)(5) and (6), references to Section 111 should be Section 112.
- Section 114: In subsection (G), a reference to Section 110 should be Section 111.
- Section 118: Cross-references to subsection (B)(7) should be changed to subsection (7).

The Department indicates that the following rules could be made more clear, concise, and understandable:

- Section 101: Definitions such as clinical oversight, patient follow-up hospital, and rural general hospital should be updated to better reflect their meaning.
- Section 102: The term “physical health services” should be used instead of “physical care services” in subsection (B).
- Section 104: In subsection (A), the defined term “observation chair” should be used instead of “behavioral health observation/stabilization chair.”
- Section 105: The rule should be amended to better reflect the requirements in A.R.S. § 36-422(A)(2).
- Section 108: Subsection (C)(3) should be rewritten to clarify that a health care institution license will not be issued an applicant until the applicable fee is paid.
- Sections 109 and 110: Clarifying changes should be made.
- Section 113: The term “infectious active tuberculosis” should be used, as it is consistent with R9-6-101.
- Section 118: The term “collaborating health care institution” should be used in subsection (B)(7).

6. Has the agency analyzed the current enforcement status of the rules?

Yes. The Department indicates that the rules are enforced as written, except for Section 106. Subsections (C)(3), (C)(6), (C)(7), and (D) contain fees that were made by exempt rulemaking in 2014 and not remade through regular rulemaking within two years after they were adopted; therefore, the Department does not enforce those fees.

7. **Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?**

No. The Department indicates that the rules are not more stringent than federal law.

8. **For rules adopted after July 29, 2010, do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?**

Yes. The rules require the issuance of a specific agency authorization, which is authorized by A.R.S. § 36-405. The statute requires the director to “adopt licensing provisions that facilitate the colocation and integration of outpatient treatment centers that provide medical, nursing and health-related services....”

9. **Conclusion**

The Department plans to submit a Notice of Final Rulemaking to the Council by July 2019. The report meets the requirements of A.R.S. § 41-1056 and R1-6-301. Council staff recommends approval of this report.



ARIZONA DEPARTMENT OF HEALTH SERVICES

POLICY & INTERGOVERNMENTAL AFFAIRS

May 16, 2018

Nicole O. Colyer, Esq., Chair
Governor's Regulatory Review Council
Arizona Department of Administration
100 N. 15th Avenue, Suite 305
Phoenix, AZ 85007

RE: Report for A.A.C. Title 9, Chapter 10, Article 1 Health Care Institutions: Licensing – General

Dear Ms. Colyer:

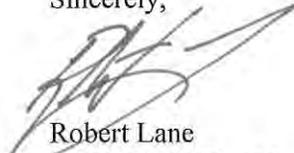
According to the five-year-review report schedule of the Governor's Regulatory Review Council (Council), a report for A.A.C. Title 9, Chapter 10, Article 1 is due to the Council no later than May 31, 2018. The Arizona Department of Health Services (Department) has reviewed 9 A.A.C. 10, Article 1 and is enclosing a report to the Council for this rule.

The Department believes that this report complies with the requirements of A.R.S. § 41-1056. The report in the format of the Council's report template, the rules reviewed, and the general and specific authority for the rules are included in the package. Economic, small business, and consumer statements for A.A.C. R9-10-119 and R9-10-120 are also attached. As described in the report, the Department plans to amend the rules in 9 A.A.C. 10, Article 1 by July 2019.

The Department certifies that it is in compliance with A.R.S. § 41-1091.

If you need any further information, please contact me at (602) 542-1020.

Sincerely,



Robert Lane
Director's Designee

RL:rms
Enclosures

Douglas A. Ducey | Governor Cara M. Christ, MD, MS | Director



Arizona Department of Health Services
Five-Year-Review Report
Title 9. Health Services
Chapter 10. Department of Health Services
Health Care Institutions: Licensing
Article 1. General
May 2018

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. §§ 36-132(A)(17) and 36-136(G)

Specific Statutory Authority: A.R.S. §§ 36-405, 36-406, 36-430

In addition, the following rules have additional specific statutory authority:

Rule	Statutory Authority
R9-10-104	A.R.S. §§ 36-421 and 36-422
R9-10-105	A.R.S. §§ 36-407, 36-421, 36-422, 36-424, and 36-425
R9-10-106	A.R.S. § 36-405(B)(5)
R9-10-107	A.R.S. §§ 36-407, 36-422, and 36-425
R9-10-108	A.R.S. §§ 41-1073 through 41-1076, and 41-1079
R9-10-109	A.R.S. §§ 36-407, 36-422, and 36-425
R9-10-110	A.R.S. §§ 36-407, 36-421, and 36-422
R9-10-111	A.R.S. §§ 36-424, 36-425, 36-427, and 36-429
R9-10-112	A.R.S. §§ 36-424, 36-425, 36-427, 36-429, and 36-2901.08
R9-10-113	A.R.S. § 36-136(I)(1)
R9-10-114	A.R.S. § 36-423
R9-10-116	A.R.S. § 36-413
R9-10-119	A.R.S. § 36-2161

2. The objective of each rule:

The purpose of the rules in Article 1 is to specify requirements that are applicable to more than one class or subclass of health care institution or for which there is no other Article in the Chapter related to the subject.

Rule	Objective
R9-10-101	To define terms used in 9 A.A.C. 10 so that a reader can consistently interpret requirements in the Chapter.

R9-10-102	<p>To identify the classes and subclasses under which a health care institution may apply for a license; and</p> <p>To require a health care institution to comply with the requirements in Article 17 if there are no specific rules in 9 A.A.C. 10 for the health care institution's class or subclass, or if the Department determines that the health care institution is an unclassified health care institution.</p>
R9-10-103	<p>To establish exceptions to health care institution licensing requirements for certain health care institutions or parts of health care institutions; and</p> <p>To identify when a hospital and its facilities do not require separate health care institution licenses.</p>
R9-10-104	<p>To establish requirements for an application for approval of architectural plans and specifications for construction or modification of a health care institution required to comply with any physical plant codes and standards in A.A.C. R9-1-412;</p> <p>To specify that an applicant may request an architectural evaluation from the Department;</p> <p>To require the Department to approve or deny architectural plans and specifications for a health care institution according to R9-10-108; and</p> <p>To clarify that obtaining Departmental approval of applicable architectural plans and specifications is a part of, but does not replace, the requirement to obtain a health care institution license before operating a health care institution.</p>
R9-10-105	<p>To establish initial license application requirements for health care institutions, including information regarding the health care institution's location, contact information, class or subclass, owner, governing authority, chief administrative officer, and physical plant; and</p> <p>To require a health care institution to comply with the initial application requirements in 9 A.A.C. 10 for the class or subclass for which licensure is requested.</p>
R9-10-106	To establish a range of fees that the Department collects for licensing of health care institutions.
R9-10-107	<p>To establish renewal license application requirements for health care institutions, including information regarding the health care institution's location, contact information, class or subclass, owner, governing authority, chief administrative officer, and physical plant; and</p> <p>To establish criteria for when a license is issued for a one-year or two-year period or for the duration of an accreditation period.</p>
R9-10-108	To delineate time-frames for the Department to grant or deny an initial or a renewal license, or grant or deny approval of an application from a health care institution.
Table 1.1	To specify time-frames for the Department's review of architectural plans and specifications, an initial or a renewal license, or an application for a modification for a health care institution.
R9-10-109	<p>To establish which changes to a health care institution require a licensee to notify the Department;</p> <p>To establish the information a licensee or a health care institution's governing authority is required to provide to the Department when a change specified in the rule occurs;</p> <p>To establish notification requirements for an adult behavioral health therapeutic home, a behavioral health respite home, an affiliated outpatient treatment center, or a counseling facility;</p> <p>To specify when a new initial license application is required and when documentation of a health care institution's architectural plans and specifications are not required to be submitted with an initial application;</p> <p>To require the Department to approve or deny a request for a change in services or modification of a health care institution according to R9-10-108; and</p> <p>To prohibit a licensee from implementing a change or modification described in the rule until an approval or amended license is issued by the Department.</p>

R9-10-110	To specify when a health care institution is required to submit an application for approval of architectural plans and specifications for a modification to the Department, To establish the documentation a licensee is required to submit to the Department when requesting approval of a modification, To require the Department to approve or deny a request for a modification according to R9-10-108, and To prohibit a licensee from implementing a modification described in the rule until an approval or amended license is issued by the Department.
R9-10-111	To establish the actions that the Department may take if an applicant or licensee is not in substantial compliance with applicable rules, and To establish the factors that the Department will consider in determining the appropriate enforcement action.
R9-10-112	To establish the circumstances under which the Department may deny, revoke, or suspend a license to operate a health care institution for an applicant, licensee, or controlling person of the health care institution.
R9-10-113	To establish requirements related to screening for tuberculosis.
R9-10-114	To establish clinical practice restrictions for a hemodialysis technician trainee working in a health care institution.
R9-10-115	To establish requirements for a health care institution using behavioral health technicians or behavioral health paraprofessionals for providing services to patients of the health care institution.
R9-10-116	To establish requirements related to the approval and operation of a nutrition and feeding assistant training program.
R9-10-118	To establish requirements for a collaborating health care institution related to documentation and to the collaborating health care institution's responsibilities for patients referred by the collaborating health care institution to an adult behavioral health therapeutic home or a behavioral health respite home.
R9-10-119	To clarify the abortion reporting requirements in A.R.S. § 36-2161, and To specify situations where a transfer of custody of fetal tissue would require reporting and when it would not require reporting.
R9-10-120	To establish requirements for a health care institution related to prescribing, ordering, or administering opioids as part of treatment.

3. **Are the rules effective in achieving their objectives?** Yes ___ No X

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation
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R9-10-101	The rule would be more effective if changes were made to definitions in the rule, including: the definition of “administrative office” were revised to specify that behavioral health services cannot be provided in a location designated as an administrative office; the term “behavioral health services” were also added to the definitions of “contracted services” and “opioid treatment”; the definition of “applicant” also included a governing authority requesting approval of a modification not requiring architectural plans and specifications; the definition of “behavioral health staff” were removed because the term is not used in the Chapter; the definition of “court-ordered pre-petition screening” were corrected to read “same meaning as “prepetition screening” in A.R.S. § 36-501”; the definition of “informed consent” were changed to use the defined term “psychotropic medication” rather than “psychotropic drug” and to add “opioid” to the definition for consistency with R9-10-120; the definition of “medication” were corrected to use the defined term “nonprescription drug” rather than “nonprescription medication”; the term “occupational therapy assistant” as defined in A.R.S. § 32-3401 were used rather than “occupational therapist assistant”; definitions of “respite capacity” and “single group license” were added; and incorrect cross-references and grammatical errors were corrected. In addition, the term “contractor,” as defined in the rule, is used incorrectly in R9-10-219(11), and the term “medical staff bylaws” should be corrected in the rule and in R9-10-203, R9-10-902, and R9-10-911.
R9-10-102	Subsection (B) contains requirements for two different persons and would be more effective if requirements for each person were in separate subsections.
R9-10-104	The rule would be more effective if the rule contained a time limit for keeping an incomplete application open before the application packet is considered withdrawn. The rule could also be more effective if changes were made to the rule to better reflect the types of services or modifications that require an architect to review architectural plans and specifications rather than licensing personnel to review a floor plan/site plan. The rule would also be more effective if the mailing address, if different from the street address, were required.
R9-10-105	The rule is not effective because it does not comply with changes made by Laws 2017, Ch. 122, to the licensing requirements in A.R.S. Title 36, Chapter 4, since it refers to an initial license and does not include an indication that the license is valid unless revoked or suspended, the license is voluntarily surrendered upon the licensee closing the health care institution, or a required fee is not paid. The rule would also be more effective if an application required information about the requested respite capacity, if applicable, and the mailing address, if different from the street address.
R9-10-106	The rule would be more effective if the obsolete subsections (C)(3), (6), and (7) and (D) were removed or remade. The fee amounts in rule have not been revised since they were adopted, effective January 1, 2010, by exempt rulemaking to implement a statutory change establishing self-funding for health care institutions. The rule could also be more effective if these fee amounts were reviewed and potentially changed so they more accurately reflect the costs to the Department.
R9-10-107	The rule is not effective because it does not comply with changes made by Laws 2017, Ch. 122, to the licensing requirements in A.R.S. Title 36, Chapter 4, since it refers to a renewal license.
R9-10-108	The rule would be more effective if subsection (B) contained a time limit for keeping open an application for approval of architectural plans and specifications before the application is considered withdrawn, if the rule did not refer to an initial or renewal license, and if other changes were made to comply with Laws 2017, Ch. 122, if necessary.
Table 1.1	The Table would be more effective if changes were made to comply with Laws 2017, Ch. 122.
R9-10-109	The rule would be more effective if it specified the notification of the Department of a change in the chief administrative officer, consistent with A.R.S. 36-425(I); required notification of a change in hours of operation; and included other changes to comply with Laws 2017, Ch. 122,

	related to initial or renewal licenses. The rule would also be more effective if the rule required the notification of a change in the health care institutions covered under a single group license and related application requirements, and if the rule more clearly delineated when a change in name requires notification of the change (name change without change in ownership) and when a new application for licensure (change in ownership) is required. Since the changes described in subsections (H) and (I) would constitute a modification rather than a change, the subsections should be removed or moved into R9-10-110.
R9-10-110	The rule would be more effective if modifications, such as a requested change in authorized services, were included in the rule.
R9-10-111	The rule would be more effective if incorrect cross-references were corrected.
R9-10-112	The rule would be more effective if changes were made in subsections (A)(2) and (3) to bring the rule into compliance with changes made by Laws 2017, Ch. 122.
R9-10-118	The rule would be more effective if incorrect cross-references were corrected.

4. **Are the rules consistent with other rules and statutes?** Yes ___ No X

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation
R9-10-101	The reference in the definition of “factory-built building” should be to A.R.S. § 41-4001, not to A.R.S. § 41-2142. The cross-reference in the definition of “speech-language pathologist” should be to A.R.S. Title 36, not to Title 35.
R9-10-105, R9-10-107, R9-10-108, Table 1.1, and R9-10-112	The rule does not comply with changes made by Laws 2017, Ch. 122, to the licensing requirements in A.R.S. Title 36, Chapter 4, which established perpetual licenses.
R9-10-109	The cross-references in subsection (C)(1) should be to R9-10-1603(A)(3) and R9-10-1803(A)(3), not to R9-10-1603(A)(4) and R9-10-1803(A)(5).
R9-10-110	The cross-reference in subsection (B)(4)(a) should be to R9-1-412 not to R9-10-412.
R9-10-111	The cross-references in subsections (A)(5) and (6) should be to R9-10-112 not to R9-10-111.
R9-10-114	The cross-reference in subsection (G) should be to R9-10-111 not to R9-10-110.
R9-10-118	The cross-references in subsections (B)(8) and (9)(c) should be to subsection (B)(7) not to subsection (7).

5. **Are the rules enforced as written?** Yes ___ No X

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency’s proposal for resolving the issue.

Rule	Explanation
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R9-10-106	The fees in subsections (C)(3), (6), and (7) and (D), which were added by the 2014 exempt rulemaking and not remade through regular rulemaking within two years after their adoption, are not enforced.
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6. **Are the rules clear, concise, and understandable?** Yes No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation
Multiple, including R9-10-101, R9-10-104, R9-10-110, R9-10-113, R9-10-115, and R9-10-116	The rule would be clearer if minor grammatical errors in the rule were corrected and wording changes made to improve understandability.
R9-10-101	The rule would be clearer if the definition of “clinical oversight” included monitoring to ensure that a behavioral health technician is providing services to a patient in an appropriate manner, if the term “patient follow-up instructions” were changed to “follow-up instructions,” if the definition of “rural general hospital” were re-formatted, and the defined term were “time-out” rather than “time out” to be consistent with use in the rest of the Chapter. Although not an issue with the definition of “pest control program” itself, other rules in the Chapter would be improved if requirements in Articles using the defined term were clarified to ensure compliance with requirements in A.A.C. R3-8-201(C)(4). In addition, the defined term “supportive services” should be used in R9-10-607(A)(3), rather than “supportive care.”
R9-10-102	The rule would be clearer if the defined term “physical health services” were used in subsection (B), rather than “physical care services.”
R9-10-104	The rule would be clearer if the defined term “observation chair” were used in subsection (A)(1)(g), rather than “behavioral health observation/stabilization chair.”
R9-10-105	The rule would be clearer if subsection (A)(5)(a) were changed to better describe requirements in A.R.S. § 36-422(A)(2).
R9-10-108	The rule would be clearer if subsection (C)(3) were clarified to indicate that a health care institution license is not issued to an applicant approved for a license until the applicable fee is paid.
R9-10-109	The rule would be clearer if the terms “affiliated counseling facility” and “affiliated outpatient treatment center” were moved from R9-10-1901 into R9-10-101.
R9-10-110	The rule would be clearer if a typographical error were corrected in subsection (B), subsection (B)(4)(a) were clarified to include a part of a health care institution, and other minor wording changes were made to improve the understandability of the rule.
R9-10-113	The rule would be clearer and more understandable if the term “infectious active tuberculosis” were used, consistent with the definition in A.A.C. R9-6-101, and defined in R9-10-101.

R9-10-118	The rule would be clearer and more understandable if the term “collaborating health care institution” were used in subsection (B)(7), consistent with the definition in R9-10-101.
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7. **Has the agency received written criticisms of the rules within the last five years?** Yes No

If yes, please fill out the table below:

Rule	Explanation

8. Economic, small business, and consumer impact comparison:

The Department currently licenses over 6,000 facilities as one of 20 classes/subclasses of health care institutions under the rules in 9 A.A.C. 10, Article 1. As of May 1, 2018, these include: 132 hospitals; 45 behavioral health inpatient facilities; 148 nursing care institutions; three recovery care centers; 8 hospice inpatient facilities; 201 outpatient surgical centers; 2,214 outpatient treatment centers; one behavioral health specialized transitional facility; four abortion clinics; three substance abuse transitional facilities; 545 behavioral health residential facilities; 40 unclassified health care institutions; 148 hospice service agencies; 219 home health agencies; 287 assisted living centers; 1,757 assisted living homes; 61 adult foster care homes; 21 adult day health care facilities; 13 behavioral health respite homes; 44 adult behavioral health therapeutic homes; and 253 counseling facilities. Under R9-10-111 and R9-10-112, the Department has undertaken 1,660 enforcement actions in the past year, resulting in the suspension or revocation of 10 licenses, and \$743,664 in civil money penalties were assessed.

In the past five years, these rules have been revised 11 times. All of the rules, except R9-10-119 and R9-10-120, were revised by at least two of the five exempt rulemakings that took place between 2013 and 2016. R9-10-119 was adopted by emergency rulemaking at 21 A.A.R. 1787, effective August 14, 2015; renewed by emergency rulemaking at 22 A.A.R. 420, effective February 11, 2016; and then adopted by regular rulemaking at 22 A.A.R. 1343, with an immediate effective date of May 5, 2016. R9-10-120 was adopted by emergency rulemaking at 23 A.A.R. 2203, effective July 28, 2017; renewed by emergency rulemaking at 24 A.A.R. 303, effective January 24, 2018; and then adopted by regular rulemaking at 24 A.A.R. 657, with an immediate effective date of March 6, 2018. An economic, small business, and consumer impact statement (EIS) was prepared as part of the regular rulemaking for both of these two rules. Annual costs/revenues changes were designated in the EIS for R9-10-119 as minimal when \$1,000 or less, moderate when between \$1,000 and \$10,000, and substantial when \$10,000 or greater in additional costs or revenues, and for R9-10-120 as minimal when more than \$0 and \$10,000 or less, moderate when between \$10,000 and \$50,000, and substantial when \$50,000 or greater in additional costs or revenues. A cost was listed as significant when meaningful or important, but not readily subject to quantification. The designations used in the EIS for R9-10-120 are used in this comparison, except when discussing R9-10-119.

Stakeholders affected by these rules include the Department, health care institutions licensed under the rules, medical practitioners in licensed health care institutions, personnel members in licensed health care institutions, patients/residents/participants/recipients and their families, and the general public. Architects, contractors, and engineers involved in the construction or modification of a health care institution are also stakeholders for R9-10-104. The Arizona Health Care Cost Containment System (AHCCCS) is also a stakeholder for R9-10-112.

As part of the exempt rulemakings, R9-10-101 has been revised four times. The 2013 integration rulemaking in 19 AAR 2015 resulted in 159 new or moved definitions, 17 revised definitions, and 18 definitions removed. The 2014 integration rulemaking in 20 A.A.R. 1409 resulted in 21 new or moved definitions, 30 revised definitions, and 4 definitions removed. The 2014 rulemaking for counseling facilities in 20 A.A.R. 3535 resulted in 1 new definition, 4 revised definitions, and 1 definition removed. The 2016 rulemaking for colocation in 22 A.A.R. 1035 resulted in 1 new definition. The Department believes that these changes provided a significant benefit to all stakeholders.

Besides clarifying existing requirements and updating cross-references, the 2013 integration rulemaking in 19 AAR 2015 resulted in the addition of new health care institution classes/subclasses being added to R9-10-102; removing references to 9 A.A.C. 20 for facilities providing behavioral health services from R9-10-103 and adding that a separate license is not required for a satellite facility or a facility only providing ancillary services. Requirements for fees were renumbered into R0-10-106 and clarified to include behavioral health facilities. Changes to R9-10-107 included the removal of the requirement for a signature to be notarized and clarification of the term of licensure and that no onsite compliance inspection would be performed during an accreditation period. The rulemaking tied enforcement actions in the original R9-10-110 to violations posing a direct risk to patients. In the original R9-10-113 for hemodialysis technician trainees, definitions that had been moved to R9-10-101 were removed, as was an obsolete/confusing requirement. The Department believes that these changes provided a significant benefit to all stakeholders, with some providing a minimal benefit.

In addition, the rulemaking added a requirement for providing information on requested licensed occupancy to R9-10-104. In R9-10-105, the rulemaking added a requirement for specifying services for which authorization is requested and providing a proposed scope of services. The revised rule also clarified that, if part of the HCI must comply with requirements in A.A.C. R9-1-412, the applicant must submit an application according to R9-10-104. Changes to R9-10-107 included a requirement for the scope of services to be provided, and changes to R9-10-109 included requirements for notification when intending to terminate operation of a health care institution. The Department believes these changes may have imposed a minimal cost on health care institutions and provided a significant benefit to other stakeholders. A new R9-10-112 added requirements related to tuberculosis screening; and a new R9-10-114 added and updated requirements for behavioral health paraprofessionals and behavioral health technicians from 9 A.A.C. 20. In R9-10-115, requirements for unclassified health care institutions were repealed since a new Article for these facilities was adopted in the Chapter, and new requirements for nutrition and feeding assistant training programs were added. Requirements

for counselling facilities were added to R9-10-116, and requirements for collaborating health care institutions with respect to responsibilities for oversight of adult behavioral health therapeutic homes and children's behavioral health respite homes were added to R9-10-117. The Department believes these changes may have imposed a minimal-to-moderate cost on health care institutions and provided a significant benefit to other stakeholders by protecting the health and safety of patients, residents, participants, and recipients.

The 2014 integration rulemaking in 20 AAR 1409 further clarified existing requirements and updated cross-references. The rulemaking also added new classes/subclasses of health care institutions, specified that a behavioral health respite home may be used for adults as well as children, and moved requirements related to modification into a separate Section than for changes to improve effectiveness. The Department believes that these changes provided a significant benefit to all stakeholders, with some providing a minimal-to-substantial benefit to some stakeholders. The rulemaking added requirements in R9-10-104 for providing information about the project architect or engineer and certification for installed equipment, as well as adding that the Department may conduct on-site review during construction to conform with current practice. In R9-10-106, the Department added fees for licensed occupancy and dialysis stations and for satellite facilities. Additional changes were also made in the Section containing requirements for behavioral health paraprofessionals and behavioral health technicians to reflect that more than policies and procedures were needed to use unlicensed individuals to perform patient care services that would require a professional license if performed outside a licensed health care institution. Minor changes were also made to the renumbered R9-10-116, adding new requirements for nutrition and feeding assistant training programs. Requirements for collaborating health care institutions with respect to responsibilities for oversight of adult behavioral health therapeutic homes and children's behavioral health respite homes were added to the renumbered R9-10-118, including responsibilities for ensuring that a new patient does not pose threat to current resident or vice versa and that a patient is appropriately placed. The rulemaking also added requirements for documentation related to placement and tuberculosis screening be in a patient's medical record at the collaborating health care institution. The Department believes these changes may have imposed a minimal-to-moderate cost on health care institutions and provided a significant benefit to other stakeholders by protecting the health and safety of patients, residents, participants, and recipients.

In addition to the changes made through the integration rulemakings in 2013 and 2014, R9-10-109 and R9-10-112 were further revised in subsequent rulemakings. In a rulemaking related to counseling facilities at 20 A.A.R. 3535, notification requirements for affiliated outpatient treatment centers and counseling facilities receiving administrative support from an affiliated outpatient treatment center were added to R9-10-109. Notification that the license of a hospital would be suspended or revoked if the hospital's provider agreement with AHCCCS were suspended or revoked was added at 20 A.A.R. 97 to comply with Laws 2013, Ch. 10. Besides the potential costs to a hospital imposed by Laws 2013, Ch. 10, rather than the rules, the Department estimates that these changes may have imposed a minimal cost on affected health care institutions.

In the EIS submitted with the rulemaking for R9-10-119, cost bearers were identified as the Department and licensed health care institutions where abortions are performed, including hospitals, outpatient treatment centers, and abortion clinics. Beneficiaries were identified as the Department, health care institutions, and the general public. The Department estimated that the review of the additional information required in the rule would impose at most a minimal cost on the Department and could provide a significant benefit to the Department from having accurate information about the final disposition of fetal tissue. Licensed health care institutions where abortions are performed were estimated to incur a minimal cost from the added time to comply with the requirement for reporting the final disposition of the fetal tissue. If a licensed health care institution where abortions are performed transfers custody of fetal tissue to a person other than as specified in the rule, the Department estimated that the licensed health care institution where abortions are performed might incur a minimal-to-moderate cost from the added time to compile the additional information required by the rule. The Department anticipated that a licensed health care institution where abortions are performed that meets the reporting exception requirements in subsection (B) of the rule might receive a significant benefit from assuring the general public that such transfers are not occurring at the health care institution. The general public was believed to receive a significant benefit from the assurance that transfers of fetal tissue to a person other than a funeral establishment or crematory are being monitored by the Department. The Department believes that the costs and benefits identified in this EIS are generally consistent with the actual costs and benefits of the rules.

The EIS submitted with the rulemaking for R9-10-120 identified persons affected by the rulemaking to include the Department, AHCCCS and other third-party payors, licensed health care institutions, individuals prescribing or ordering an opioid on behalf of a licensed health care institution, individuals administering an opioid to a patient on behalf of a licensed health care institution or providing assistance in the self-administration of medication for a patient's prescribed opioid, patients of licensed health care institutions and their families, and the general public. The Department was believed to receive a significant benefit from being better able to, and more easily, assess whether a licensed health care institution is adequately addressing the opioid epidemic occurring in Arizona. The Department believed that AHCCCS and other third-party payers might receive up to a substantial cost savings through a reduction in the number of hospitalizations or emergency department visits from individuals suffering an opioid overdose as a result of opioids prescribed, ordered, or administered as part of treatment in licensed health care institutions. The Department believed that making changes to their policies and procedures to specifically address opioids and having specific processes in place as part of an existing quality management program would cause most licensed health care institutions to incur a minimal cost, although there might be a few with extensive ordering, prescribing, or administration policies and procedures or that identified a larger number of opioid-related adverse reactions or other negative patient outcomes that could incur a moderate cost. Having these processes in place was believed to provide a significant benefit to a licensed health care institution. The Department anticipated that licensed health care institutions not already reporting deaths to the Department might incur a minimal-to-moderate increase in costs for reporting these deaths, depending on the

number of opioid-related deaths being reported. Clinical requirements that the administrator of a licensed health care institution is required to ensure take place might impose minimal-to-substantial increased cost on a health care institution depending on what practices the health care institution was currently employing. The requirements in the rule related to the administration of an opioid to a patient or to providing assistance in the self-administration of medication for a prescribed opioid might cause a licensed health care institution to incur at most a minimal increased cost. The Department believed that the rule might cause an affected medical practitioner (physician, physician assistant, or registered nurse practitioner who works for a licensed health care institution) to incur minimal-to-moderate additional costs, depending on the number of patients for whom the medical practitioner orders, prescribes, or administers opioids, and cause them to receive a significant benefit from providing better care to a patient. The Department anticipated that patients and their families might receive a significant benefit from the requirements in the rule. If a licensed health care institution passed on any increases in cost due to the rule, a patient could incur a minimal increase in the cost of services provided by the licensed health care institution. The Department anticipated that the general public would receive a significant benefit from the rule, which was developed to help combat the opioid overdose epidemic and reduce the number of opioid overdose deaths. Since the effective date of this rule was March 6, 2018, it is too early to determine if the costs and benefits identified in this EIS are generally consistent with the actual costs and benefits of the rules.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes ___ No X

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**

Please state what the previous course of action was and if the agency did not complete the action, please explain why not.
This is the first five-year review of the rules since they were totally revised in the 2013 rulemaking, so there is no previous course of action.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The changes in both the 2013 exempt rulemaking and the 2014 exempt rulemaking, as well as additional rulemakings revising parts of the Article, were intended to reduce monetary and regulatory costs. Although most of the requirements in the Article impose the least burden and costs to persons regulated by the rule necessary to achieve the underlying regulatory objective, the Department believes that the burden of the rules would be further reduced through a rulemaking to address identified issues.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No X

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

13. For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:

The rules require the issuance of a specific agency authorization, which is authorized by A.R.S. § 36-405, so a general permit is not applicable.

14. Proposed course of action

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department plans to change the rules to implement Laws 2017, Ch. 122, as well as to address other issues identified in this report, and submit a Notice of Final Rulemaking to the Governor's Regulatory Review Council by July 2019.

TITLE 9. HEALTH SERVICES

CHAPTER 10. DEPARTMENT OF HEALTH SERVICES - HEALTH CARE INSTITUTIONS: LICENSING

Editor's Note: The heading for 9 A.A.C. 10 changed from "Licensure" to "Licensing" per a request from the Department of Health Services (Supp. 03-4).

Editor's Note: The Office of the Secretary of State publishes all Chapters on white paper (Supp. 01-2).

Editor's Note: This Chapter contains rules which were adopted, amended, and repealed under exemptions from the provisions of the Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1993, Ch. 163, § 3(B); Laws 1996, Ch. 329, § 5; Laws 1998, Ch. 178 § 17, and Laws 1999, Ch. 311. Exemption from A.R.S. Title 41, Chapter 6 means that the Department of Health Services did not submit these rules to the Governor's Regulatory Review Council for review; the Department may not have submitted notice of proposed rulemaking to the Secretary of State for publication in the Arizona Administrative Register; the Department was not required to hold public hearings on these rules; and the Attorney General did not certify these rules. Because this Chapter contains rules which are exempt from the regular rulemaking process, the Chapter is printed on blue paper.

ARTICLE 1. GENERAL

Section

R9-10-101.	Definitions
R9-10-102.	Health Care Institution Classes and Subclasses; Requirements
R9-10-103.	Licensing Exceptions
R9-10-104.	Approval of Architectural Plans and Specifications
R9-10-105.	Initial License Application
R9-10-106.	Fees
R9-10-107.	Renewal License Application
R9-10-108.	Time-frames
R9-10-110.	Modification of a Health Care Institution
R9-10-111.	Enforcement Actions
R9-10-112.	Denial, Revocation, or Suspension of License
R9-10-113.	Tuberculosis Screening
R9-10-114.	Clinical Practice Restrictions for Hemodialysis Technician Trainees
R9-10-115.	Behavioral Health Paraprofessionals; Behavioral Health Technicians
R9-10-116.	Nutrition and Feeding Assistant Training Programs
R9-10-117.	Repealed
R9-10-118.	Collaborating Health Care Institution
R9-10-119.	Abortion Reporting
R9-10-120.	Opioid Prescribing and Treatment
R9-10-122.	Repealed
R9-10-123.	Repealed
R9-10-124.	Repealed

ARTICLE 1. GENERAL

R9-10-101. Definitions

In addition to the definitions in A.R.S. § 36-401(A), the following definitions apply in this Chapter unless otherwise specified:

1. "Abortion clinic" has the same meaning as in A.R.S. § 36-449.01.
2. "Abuse" means:
 - a. The same:
 - i. For an individual 18 years of age or older, as in A.R.S. § 46-451; and
 - ii. For an individual less than 18 years of age, as in A.R.S. § 8-201;
 - b. A pattern of ridiculing or demeaning a patient;
 - c. Making derogatory remarks or verbally harassing a patient; or
 - d. Threatening to inflict physical harm on a patient.
3. "Accredited" has the same meaning as in A.R.S. § 36-422.
4. "Activities of daily living" means ambulating, bathing, toileting, grooming, eating, and getting in or out of a bed or a chair.
5. "Adjacent" means not intersected by:
 - a. Property owned, operated, or controlled by a person other than the applicant or licensee; or
 - b. A public thoroughfare.
6. "Administrative completeness review time-frame" has the same meaning as in A.R.S. § 41-1072.
7. "Administrative office" means a location used by personnel for recordkeeping and record retention but not for providing medical services, nursing services, or health-related services.
8. "Admission" means, after completion of an individual's screening or registration by a health care institution, the individual begins receiving physical health services or behavioral health services and is accepted as a patient of the health care institution.
9. "Adult" has the same meaning as in A.R.S. § 1-215.
10. "Adult behavioral health therapeutic home" means a residence that provides room and board, assists in acquiring daily living skills, coordinates transportation to scheduled appointments, monitors behaviors, assists in the self-administration of medication, and provides feedback to a case manager related to behavior for an individual 18 years of age or older based on the individual's behavioral health issue and need for behavioral health services and may provide behavioral health services under the clinical oversight of a behavioral health professional.
11. "Adverse reaction" means an unexpected outcome that threatens the health or safety of a patient as a result of a medical service, nursing service, or health-related service provided to the patient.
12. "Ancillary services" means services other than medical services, nursing services, or health-related services provided to a patient.
13. "Anesthesiologist" means a physician granted clinical privileges to administer anesthesia.
14. "Applicant" means a governing authority requesting:
 - a. Approval of a health care institution's architectural plans and specifications, or
 - b. A health care institution license.
15. "Application packet" means the information, documents, and fees required by the Department for the:
 - a. Approval of a health care institution's modification or construction, or
 - b. Licensing of a health care institution.
16. "Assessment" means an analysis of a patient's need for physical health services or behavioral health services to determine which services a health care institution will provide to the patient.
17. "Assistance in the self-administration of medication" means restricting a patient's access to the patient's medication and providing support to the patient while the patient takes the medication to ensure that the medication is taken as ordered.
18. "Attending physician" means a physician designated by a patient to participate in or coordinate the medical services provided to the patient.
19. "Authenticate" means to establish authorship of a document or an entry in a medical record by:
 - a. A written signature;
 - b. An individual's initials, if the individual's written signature appears on the document or in the medical record;
 - c. A rubber-stamp signature; or
 - d. An electronic signature code.
20. "Authorized service" means specific medical services, nursing services, or health-related services provided by a specific health care institution class or subclass for which the health care institution is required to obtain approval from the Department before providing the medical services, nursing services, or health-related services.
21. "Available" means:

- a. For an individual, the ability to be contacted and to provide an immediate response by any means possible;
 - b. For equipment and supplies, physically retrievable at a health care institution; and
 - c. For a document, retrievable by a health care institution or accessible according to the applicable time-frames in this Chapter.
22. “Behavioral care”:
- a. Means limited behavioral health services, provided to a patient whose primary admitting diagnosis is related to the patient’s need for physical health services, that include:
 - i. Assistance with the patient’s psychosocial interactions to manage the patient’s behavior that can be performed by an individual without a professional license or certificate including:
 - (1) Direction provided by a behavioral health professional, and
 - (2) Medication ordered by a medical practitioner or behavioral health professional; or
 - ii. Behavioral health services provided by a behavioral health professional on an intermittent basis to address the patient’s significant psychological or behavioral response to an identifiable stressor or stressors; and
 - b. Does not include court-ordered behavioral health services.
23. “Behavioral health facility” means a behavioral health inpatient facility, a behavioral health residential facility, a substance abuse transitional facility, a behavioral health specialized transitional facility, an outpatient treatment center that only provides behavioral health services, an adult behavioral health therapeutic home, a behavioral health respite home, or a counseling facility.
24. “Behavioral health inpatient facility” means a health care institution that provides continuous treatment to an individual experiencing a behavioral health issue that causes the individual to:
- a. Have a limited or reduced ability to meet the individual’s basic physical needs;
 - b. Suffer harm that significantly impairs the individual’s judgment, reason, behavior, or capacity to recognize reality;
 - c. Be a danger to self;
 - d. Be a danger to others;
 - e. Be persistently or acutely disabled as defined in A.R.S. § 36-501; or
 - f. Be gravely disabled.
25. “Behavioral health issue” means an individual’s condition related to a mental disorder, a personality disorder, substance abuse, or a significant psychological or behavioral response to an identifiable stressor or stressors.
26. “Behavioral health observation/stabilization services” means crisis services provided, in an outpatient setting, to an individual whose behavior or condition indicates that the individual:
- a. Requires nursing services,
 - b. May require medical services, and
 - c. May be a danger to others or a danger to self.
27. “Behavioral health paraprofessional” means an individual who is not a behavioral health professional who provides, under supervision by a behavioral health professional, the following services to a patient to address the patient’s behavioral health issue:
- a. Services that, if provided in a setting other than a health care institution would be required to be provided by an individual licensed under A.R.S, Title 32, Chapter 33; or
 - b. Health-related services.
28. “Behavioral health professional” means:
- a. An individual licensed under A.R.S. Title 32, Chapter 33, whose scope of practice allows the individual to:
 - i. Independently engage in the practice of behavioral health as defined in A.R.S. § 32-3251; or
 - ii. Except for a licensed substance abuse technician, engage in the practice of behavioral health as defined in A.R.S. § 32-3251 under direct supervision as defined in A.A.C. R4-6-101;
 - b. A psychiatrist as defined in A.R.S. § 36-501;
 - c. A psychologist as defined in A.R.S. § 32-2061;
 - d. A physician;
 - e. A behavior analyst as defined in A.R.S. § 32-2091;
 - f. A registered nurse practitioner licensed as an adult psychiatric and mental health nurse; or
 - g. A registered nurse.
29. “Behavioral health residential facility” means a health care institution that provides treatment to an individual experiencing a behavioral health issue that:
- a. Limits the individual’s ability to be independent, or
 - b. Causes the individual to require treatment to maintain or enhance independence.
30. “Behavioral health respite home” means a residence where respite care services, which may include assistance in the self-administration of medication, are provided to an individual based on the individual’s behavioral health issue and need for behavioral health services.

31. "Behavioral health specialized transitional facility" means a health care institution that provides inpatient behavioral health services and physical health services to an individual determined to be a sexually violent person according to A.R.S. Title 36, Chapter 37.
32. "Behavioral health staff" means a:
 - a. Behavioral health paraprofessional,
 - b. Behavioral health technician, or
 - c. Personnel member in a nursing care institution or assisted living facility who provides behavioral care.
33. "Behavioral health technician" means an individual who is not a behavioral health professional who provides, with clinical oversight by a behavioral health professional, the following services to a patient to address the patient's behavioral health issue:
 - a. Services that, if provided in a setting other than a health care institution would be required to be provided by an individual licensed under A.R.S., Title 32, Chapter 33; or
 - b. Health-related services.
34. "Biohazardous medical waste" has the same meaning as in A.A.C. R18-13-1401.
35. "Calendar day" means each day, not including the day of the act, event, or default from which a designated period of time begins to run, but including the last day of the period unless it is a Saturday, Sunday, statewide furlough day, or legal holiday, in which case the period runs until the end of the next day that is not a Saturday, Sunday, statewide furlough day, or legal holiday.
36. "Case manager" means an individual assigned by an entity other than a health care institution to coordinate the physical health services or behavioral health services provided to a patient at the health care institution.
37. "Certification" means, in this Article, a written statement that an item or a system complies with the applicable requirements incorporated by reference in A.A.C. R9-1-412.
38. "Certified health physicist" means an individual recognized by the American Board of Health Physics as complying with the health physics criteria and examination requirements established by the American Board of Health Physics.
39. "Change in ownership" means conveyance of the ability to appoint, elect, or otherwise designate a health care institution's governing authority from an owner of the health care institution to another person.
40. "Chief administrative officer" or "administrator" means an individual designated by a governing authority to implement the governing authority's direction in a health care institution.
41. "Clinical laboratory services" means the biological, microbiological, serological, chemical, immunohematological, hematological, biophysical, cytological, pathological, or other examination of materials derived from the human body for the purpose of providing information for the diagnosis, prevention, or treatment of a disease or impairment of a human being, or for the assessment of the health of a human being, including procedures to determine, measure, or otherwise describe the presence or absence of various substances or organisms in the body.
42. "Clinical oversight" means:
 - a. Monitoring the behavioral health services provided by a behavioral health technician to ensure that the behavioral health technician is providing the behavioral health services according to the health care institution's policies and procedures,
 - b. Providing on-going review of a behavioral health technician's skills and knowledge related to the provision of behavioral health services,
 - c. Providing guidance to improve a behavioral health technician's skills and knowledge related to the provision of behavioral health services, and
 - d. Recommending training for a behavior health technician to improve the behavioral health technician's skills and knowledge related to the provision of behavioral health services.
43. "Clinical privileges" means authorization to a medical staff member to provide medical services granted by a governing authority or according to medical staff bylaws.
44. "Collaborating health care institution" means a health care institution licensed to provide outpatient behavioral health services that has a written agreement with an adult behavioral health therapeutic home or a behavioral health respite home to:
 - a. Coordinate behavioral health services provided to a resident at the adult behavioral health therapeutic home or a recipient at a behavioral health respite home, and
 - b. Work with the provider to ensure a resident at the adult behavioral health therapeutic home or a recipient at a behavioral health respite home receives behavioral health services according to the resident's treatment plan.
45. "Communicable disease" has the same meaning as in A.R.S. § 36-661.
46. "Conspicuously posted" means placed:
 - a. At a location that is visible and accessible; and
 - b. Unless otherwise specified in the rules, within the area where the public enters the premises of a health care institution.
47. "Consultation" means an evaluation of a patient requested by a medical staff member or personnel member.

48. "Contracted services" means medical services, nursing services, health-related services, ancillary services, or environmental services provided according to a documented agreement between a health care institution and the person providing the medical services, nursing services, health-related services, ancillary services, or environmental services.
49. "Contractor" has the same meaning as in A.R.S. § 32-1101.
50. "Controlled substance" has the same meaning as in A.R.S. § 36-2501.
51. "Counseling" has the same meaning as "practice of professional counseling" in A.R.S. § 32-3251.
52. "Counseling facility" means a health care institution that only provides counseling, which may include:
 - a. DUI screening, education, or treatment according to the requirements in 9 A.A.C. 20, Article 1; or
 - b. Misdemeanor domestic violence offender treatment according to the requirements in 9 A.A.C. 20, Article 2.
53. "Court-ordered evaluation" has the same meaning as "evaluation" in A.R.S. § 36-501.
54. "Court-ordered pre-petition screening" has the same meaning as in A.R.S. § 36-501.
55. "Court-ordered treatment" means treatment provided according to A.R.S. Title 36, Chapter 5.
56. "Crisis services" means immediate and unscheduled behavioral health services provided to a patient to address an acute behavioral health issue affecting the patient.
57. "Current" means up-to-date, extending to the present time.
58. "Daily living skills" means activities necessary for an individual to live independently and include meal preparation, laundry, housecleaning, home maintenance, money management, and appropriate social interactions.
59. "Danger to others" has the same meaning as in A.R.S. § 36-501.
60. "Danger to self" has the same meaning as in A.R.S. § 36-501.
61. "Detoxification services" means behavioral health services and medical services provided to an individual to:
 - a. Reduce or eliminate the individual's dependence on alcohol or other drugs, or
 - b. Provide treatment for the individual's signs or symptoms of withdrawal from alcohol or other drugs.
62. "Diagnostic procedure" means a method or process performed to determine whether an individual has a medical condition or behavioral health issue.
63. "Dialysis" means the process of removing dissolved substances from a patient's body by diffusion from one fluid compartment to another across a semi-permeable membrane.
64. "Dialysis services" means medical services, nursing services, and health-related services provided to a patient receiving dialysis.
65. "Dialysis station" means a designated treatment area approved by the Department for use by a patient receiving dialysis or dialysis services.
66. "Dialyzer" means an apparatus containing semi-permeable membranes used as a filter to remove wastes and excess fluid from a patient's blood.
67. "Disaster" means an unexpected occurrence that adversely affects a health care institution's ability to provide services.
68. "Discharge" means a documented termination of services to a patient by a health care institution.
69. "Discharge instructions" means documented information relevant to a patient's medical condition or behavioral health issue provided by a health care institution to the patient or the patient's representative at the time of the patient's discharge.
70. "Discharge planning" means a process of establishing goals and objectives for a patient in preparation for the patient's discharge.
71. "Discharge summary" means a documented brief review of services provided to a patient, current patient status, and reasons for the patient's discharge.
72. "Disinfect" means to clean in order to prevent the growth of or to destroy disease-causing microorganisms.
73. "Documentation" or "documented" means information in written, photographic, electronic, or other permanent form.
74. "Drill" means a response to a planned, simulated event.
75. "Drug" has the same meaning as in A.R.S. § 32-1901.
76. "Electronic" has the same meaning as in A.R.S. § 44-7002.
77. "Electronic signature" has the same meaning as in A.R.S. § 44-7002.
78. "Emergency" means an immediate threat to the life or health of a patient.
79. "Emergency medical services provider" has the same meaning as in A.R.S. § 36-2201.
80. "Environmental services" means activities such as housekeeping, laundry, facility maintenance, or equipment maintenance.
81. "Equipment" means, in this Article, an apparatus, a device, a machine, or a unit that is required to comply with the specifications incorporated by reference in A.A.C. R9-1-412.
82. "Exploitation" has the same meaning as in A.R.S. § 46-451.
83. "Factory-built building" has the same meaning as in A.R.S. § 41-2142.

84. "Family" or "family member" means an individual's spouse, sibling, child, parent, grandparent, or another individual designated by the individual.
85. "Food services" means the storage, preparation, serving, and cleaning up of food intended for consumption in a health care institution.
86. "Garbage" has the same meaning as in A.A.C. R18-13-302.
87. "General consent" means documentation of an agreement from an individual or the individual's representative to receive physical health services to address the individual's medical condition or behavioral health services to address the individual's behavioral health issues.
88. "General hospital" means a subclass of hospital that provides surgical services and emergency services.
89. "Gravely disabled" has the same meaning as in A.R.S. § 36-501.
90. "Hazard" or "hazardous" means a condition or situation where a patient or other individual may suffer physical injury.
91. "Health care directive" has the same meaning as in A.R.S. § 36-3201.
92. "Hemodialysis" means the process for removing wastes and excess fluids from a patient's blood by passing the blood through a dialyzer.
93. "Home health agency" has the same meaning as in A.R.S. § 36-151.
94. "Home health aide" means an individual employed by a home health agency to provide home health services under the direction of a registered nurse or therapist.
95. "Home health aide services" means those tasks that are provided to a patient by a home health aide under the direction of a registered nurse or therapist.
96. "Home health services" has the same meaning as in A.R.S. § 36-151.
97. "Hospice inpatient facility" means a subclass of hospice that provides hospice services to a patient on a continuous basis with the expectation that the patient will remain on the hospice's premises for 24 hours or more.
98. "Hospital" means a class of health care institution that provides, through an organized medical staff, inpatient beds, medical services, continuous nursing services, and diagnosis or treatment to a patient.
99. "Immediate" means without delay.
100. "Incident" means an unexpected occurrence that harms or has the potential to harm a patient, while the patient is:
 - a. On the premises of a health care institution, or
 - b. Not on the premises of a health care institution but directly receiving physical health services or behavioral health services from a personnel member who is providing the physical health services or behavioral health services on behalf of the health care institution.
101. "Infection control" means to identify, prevent, monitor, and minimize infections.
102. "Informed consent" means:
 - a. Advising a patient of a proposed treatment, surgical procedure, psychotropic drug, or diagnostic procedure; alternatives to the treatment, surgical procedure, psychotropic drug, or diagnostic procedure; and associated risks and possible complications; and
 - b. Obtaining documented authorization for the proposed treatment, surgical procedure, psychotropic drug, or diagnostic procedure from the patient or the patient's representative.
103. "In-service education" means organized instruction or information that is related to physical health services or behavioral health services and that is provided to a medical staff member, personnel member, employee, or volunteer.
104. "Interval note" means documentation updating a patient's:
 - a. Medical condition after a medical history and physical examination is performed, or
 - b. Behavioral health issue after an assessment is performed.
105. "Isolation" means the separation, during the communicable period, of infected individuals from others, to limit the transmission of infectious agents.
106. "Leased facility" means a facility occupied or used during a set time period in exchange for compensation.
107. "License" means:
 - a. Written approval issued by the Department to a person to operate a class or subclass of health care institution at a specific location; or
 - b. Written approval issued to an individual to practice a profession in this state.
108. "Licensed occupancy" means the total number of individuals for whom a health care institution is authorized by the Department to provide crisis services in a unit providing behavioral health observation/stabilization services.
109. "Licensee" means an owner approved by the Department to operate a health care institution.
110. "Manage" means to implement policies and procedures established by a governing authority, an administrator, or an individual providing direction to a personnel member.
111. "Medical condition" means the state of a patient's physical or mental health, including the patient's illness, injury, or disease.

112. "Medical director" means a physician who is responsible for the coordination of medical services provided to patients in a health care institution.
113. "Medical history" means an account of a patient's health, including past and present illnesses, diseases, or medical conditions.
114. "Medical practitioner" means a physician, physician assistant, or registered nurse practitioner.
115. "Medical record" has the same meaning as "medical records" in A.R.S. § 12-2291.
116. "Medical staff" means physicians and other individuals licensed pursuant to A.R.S. Title 32 who have clinical privileges at a health care institution.
117. "Medical staff by-laws" means standards, approved by the medical staff and the governing authority, that provide the framework for the organization, responsibilities, and self-governance of the medical staff.
118. "Medical staff member" means an individual who is part of the medical staff of a health care institution.
119. "Medication" means one of the following used to maintain health or to prevent or treat a medical condition or behavioral health issue:
 - a. Biologicals as defined in A.A.C. R18-13-1401,
 - b. Prescription medication as defined in A.R.S. § 32-1901, or
 - c. Nonprescription medication as defined in A.R.S. § 32-1901.
120. "Medication administration" means restricting a patient's access to the patient's medication and providing the medication to the patient or applying the medication to the patient's body, as ordered by a medical practitioner.
121. "Medication error" means:
 - a. The failure to administer an ordered medication;
 - b. The administration of a medication not ordered; or
 - c. The administration of a medication:
 - i. In an incorrect dosage,
 - ii. More than 60 minutes before or after the ordered time of administration unless ordered to do so, or
 - iii. By an incorrect route of administration.
122. "Mental disorder" means the same as in A.R.S. § 36-501.
123. "Mobile clinic" means a movable structure that:
 - a. Is not physically attached to a health care institution's facility;
 - b. Provides medical services, nursing services, or health related service to an outpatient under the direction of the health care institution's personnel; and
 - c. Is not intended to remain in one location indefinitely.
124. "Monitor" or "monitoring" means to check systematically on a specific condition or situation.
125. "Neglect" has the same meaning:
 - a. For an individual less than 18 years of age, as in A.R.S. § 8-201; and
 - b. For an individual 18 years of age or older, as in A.R.S. § 46-451.
126. "Nephrologist" means a physician who is board eligible or board certified in nephrology by a professional credentialing board.
127. "Nurse" has the same meaning as "registered nurse" or "practical nurse" as defined in A.R.S. § 32-1601.
128. "Nursing personnel" means individuals authorized according to A.R.S. § Title 32, Chapter 15 to provide nursing services.
129. "Observation chair" means a physical piece of equipment that:
 - a. Is located in a designated area where behavioral health observation/stabilization services are provided,
 - b. Allows an individual to fully recline, and
 - c. Is used by the individual while receiving crisis services.
130. "Occupational therapist" has the same meaning as in A.R.S. § 32-3401.
131. "Occupational therapist assistant" has the same meaning as in A.R.S. § 32-3401.
132. "Ombudsman" means a resident advocate who performs the duties described in A.R.S. § 46-452.02.
133. "On-call" means a time during which an individual is available and required to come to a health care institution when requested by the health care institution.
134. "Opioid treatment" means providing medical services, nursing services, health-related services, and ancillary services to a patient receiving an opioid agonist treatment medication for opiate addiction.
135. "Opioid agonist treatment medication" means a prescription medication that is approved by the U.S. Food and Drug Administration under 21 U.S.C. § 355 for use in the treatment of opiate addiction.
136. "Order" means instructions to provide
 - a. Physical health services to a patient from a medical practitioner or as otherwise provided by law; or
 - b. Behavioral health services to a patient from a behavioral health professional.
137. "Orientation" means the initial instruction and information provided to an individual before the individual starts work or volunteer services in a health care institution.
138. "Outing" means a social or recreational activity that:
 - a. Occurs away from the premises,

- b. Is not part of a behavioral health inpatient facility's or behavioral health residential facility's daily routine, and
 - c. Lasts longer than four hours.
139. "Outpatient surgical center" means a class of health care institution that has the facility, staffing, and equipment to provide surgery and anesthesia services to a patient whose recovery, in the opinions of the patient's surgeon and, if an anesthesiologist would be providing anesthesia services to the patient, the anesthesiologist, does not require inpatient care in a hospital.
140. "Outpatient treatment center" means a class of health care institution without inpatient beds that provides physical health services or behavioral health services for the diagnosis and treatment of patients.
141. "Overall time-frame" means the same as in A.R.S. § 41-1072.
142. "Owner" means a person who appoints, elects, or designates a health care institution's governing authority.
143. "Participant" means a patient receiving physical health services or behavioral health services from an adult day health care facility or a substance abuse transitional facility.
144. "Participant's representative" means the same as "patient's representative" for a participant.
145. "Patient" means an individual receiving physical health services or behavioral health services from a health care institution.
146. "Patient follow-up instructions" means information relevant to a patient's medical condition or behavioral health issue that is provided to the patient, the patient's representative, or a health care institution.
147. "Patient's representative" means:
- a. A patient's legal guardian;
 - b. If a patient is less than 18 years of age and not an emancipated minor, the patient's parent;
 - c. If a patient is 18 years of age or older or an emancipated minor, an individual acting on behalf of the patient with the written consent of the patient or patient's legal guardian; or
 - d. A surrogate as defined in A.R.S. § 36-3201.
148. "Person" means the same as in A.R.S. § 1-215 and includes a governmental agency.
149. "Personnel member" means, except as defined in specific Articles in this Chapter and excluding a medical staff member, a student, or an intern, an individual providing physical health services or behavioral health services to a patient.
150. "Pest control program" means activities that minimize the presence of insects and vermin in a health care institution to ensure that a patient's health and safety is not at risk.
151. "Pharmacist" has the same meaning as in A.R.S. § 32-1901.
152. "Physical examination" means to observe, test, or inspect an individual's body to evaluate health or determine cause of illness, injury, or disease.
153. "Physical health services" means medical services, nursing services, health-related services, or ancillary services provided to an individual to address the individual's medical condition.
154. "Physical therapist" has the same meaning as in A.R.S. § 32-2001.
155. "Physical therapist assistant" has the same meaning as in A.R.S. § 32-2001.
156. "Physician assistant" has the same meaning as in A.R.S. § 32-2501.
157. "Premises" means property that is designated by an applicant or licensee and licensed by the Department as part of a health care institution where physical health services or behavioral health services are provided to a patient.
158. "Professional credentialing board" means a non-governmental organization that designates individuals who have met or exceeded established standards for experience and competency in a specific field.
159. "Progress note" means documentation by a medical staff member, nurse, or personnel member of:
- a. An observed patient response to a physical health service or behavioral health service provided to the patient,
 - b. A patient's significant change in condition, or
 - c. Observed behavior of a patient related to the patient's medical condition or behavioral health issue.
160. "PRN" means *pro re nata* or given as needed.
161. "Project" means specific construction or modification of a facility stated on an architectural plans and specifications approval application.
162. "Provider" means an individual to whom the Department issues a license to operate an adult behavioral health therapeutic home or a behavioral health respite home in the individual's place of residence.
163. "Provisional license" means the Department's written approval to operate a health care institution issued to an applicant or licensee that is not in substantial compliance with the applicable laws and rules for the health care institution.
164. "Psychotropic medication" means a chemical substance that:
- a. Crosses the blood-brain barrier and acts primarily on the central nervous system where it affects brain function, resulting in alterations in perception, mood, consciousness, cognition, and behavior; and
 - b. Is provided to a patient to address the patient's behavioral health issue.

165. "Quality management program" means ongoing activities designed and implemented by a health care institution to improve the delivery of medical services, nursing services, health-related services, and ancillary services provided by the health care institution.
166. "Recovery care center" has the same meaning as in A.R.S. § 36-448.51.
167. "Referral" means providing an individual with a list of the class or subclass of health care institution or type of health care professional that may be able to provide the behavioral health services or physical health services that the individual may need and may include the name or names of specific health care institutions or health care professionals.
168. "Registered dietitian" means an individual approved to work as a dietitian by the American Dietetic Association's Commission on Dietetic Registration.
169. "Registered nurse" has the same meaning as in A.R.S. § 32-1601.
170. "Registered nurse practitioner" has the same meaning as A.R.S. § 32-1601.
171. "Regular basis" means at recurring, fixed, or uniform intervals.
172. "Research" means the use of a human subject in the systematic study, observation, or evaluation of factors related to the prevention, assessment, treatment, or understanding of a medical condition or behavioral health issue.
173. "Resident" means an individual living in and receiving physical health services or behavioral health services from a nursing care institution, a behavioral health residential facility, an assisted living facility, or an adult behavioral health therapeutic home.
174. "Resident's representative" means the same as "patient's representative" for a resident.
175. "Respiratory care services" has the same meaning as "practice of respiratory care" as defined in A.R.S. § 32-3501.
176. "Respiratory therapist" has the same meaning as in A.R.S. § 32-3501.
177. "Respite services" means respite care services provided to an individual who is receiving behavioral health services.
178. "Restraint" means any physical or chemical method of restricting a patient's freedom of movement, physical activity, or access to the patient's own body.
179. "Risk" means potential for an adverse outcome.
180. "Room" means space contained by a floor, a ceiling, and walls extending from the floor to the ceiling that has at least one door.
181. "Rural general hospital" means a subclass of hospital having 50 or fewer inpatient beds and located more than 20 surface miles from a general hospital or another rural general hospital that requests to be and is licensed as a rural general hospital rather than a general hospital.
182. "Satellite facility" has the same meaning as in A.R.S. § 36-422.
183. "Scope of services" means a list of the behavioral health services or physical health services the governing authority of a health care institution has designated as being available to a patient at the health care institution.
184. "Seclusion" means the involuntary solitary confinement of a patient in a room or an area where the patient is prevented from leaving.
185. "Self-administration of medication" means a patient having access to and control of the patient's medication and may include the patient receiving limited support while taking the medication.
186. "Sexual abuse" means the same as in A.R.S. § 13-1404(A).
187. "Sexual assault" means the same as in A.R.S. § 13-1406(A).
188. "Shift" means the beginning and ending time of a continuous work period established by a health care institution's policies and procedures.
189. "Signature" means:
 - a. A handwritten or stamped representation of an individual's name or a symbol intended to represent an individual's name, or
 - b. An electronic signature.
190. "Significant change" means an observable deterioration or improvement in a patient's physical, cognitive, behavioral, or functional condition that may require an alteration to the physical health services or behavioral health services provided to the patient.
191. "Speech-language pathologist" means an individual licensed according A.R.S. Title 35, Chapter 17, Article 4 to engage in the practice of speech-language pathology, as defined in A.R.S. § 36-1901.
192. "Special hospital" means a subclass of hospital that:
 - a. Is licensed to provide hospital services within a specific branch of medicine; or
 - b. Limits admission according to age, gender, type of disease, or medical condition.
193. "Student" means an individual attending an educational institution and working under supervision in a health care institution through an arrangement between the health care institution and the educational institution.
194. "Substantial" when used in connection with a modification means:

- a. A change in a health care institution's licensed capacity, licensed occupancy, or the number of dialysis stations;
 - b. An addition or deletion of an authorized service;
 - c. A change in the physical plant, including facilities or equipment, that costs more than \$300,000; or
 - d. A change in the building where a health care institution is located that affects compliance with applicable physical plant codes and standards incorporated by reference in A.A.C. R9-1-412.
195. "Substance abuse" means an individual's misuse of alcohol or other drug or chemical that:
- a. Alters the individual's behavior or mental functioning;
 - b. Has the potential to cause the individual to be psychologically or physiologically dependent on alcohol or other drug or chemical; and
 - c. Impairs, reduces, or destroys the individual's social or economic functioning.
196. "Substance abuse transitional facility" means a class of health care institution that provides behavioral health services to an individual over 18 years of age who is intoxicated or may have a substance abuse problem.
197. "Supportive services" has the same meaning as in A.R.S. § 36-151.
198. "Substantive review time-frame" means the same as in A.R.S. § 41-1072.
199. "Surgical procedure" means the excision or incision of a patient's body for the:
- a. Correction of a deformity or defect,
 - b. Repair of an injury, or
 - c. Diagnosis, amelioration, or cure of disease.
200. "Swimming pool" has the same meaning as "semipublic swimming pool" in A.A.C. R18-5-201.
201. "System" means interrelated, interacting, or interdependent elements that form a whole.
202. "Tax ID number" means a numeric identifier that a person uses to report financial information to the United States Internal Revenue Service.
203. "Telemedicine" has the same meaning as in A.R.S. § 36-3601.
204. "Therapeutic diet" means foods or the manner in which food is to be prepared that are ordered for a patient.
205. "Therapist" means an occupational therapist, a physical therapist, a respiratory therapist, or a speech-language pathologist.
206. "Time out" means providing a patient a voluntary opportunity to regain self-control in a designated area from which the patient is not physically prevented from leaving.
207. "Transfer" means a health care institution discharging a patient and sending the patient to another licensed health care institution as an inpatient or resident without intending that the patient be returned to the sending health care institution.
208. "Transport" means a licensed health care institution:
- a. Sending a patient to a receiving licensed health care institution for outpatient services with the intent of the patient returning to the sending licensed health care institution, or
 - b. Discharging a patient to return to a sending licensed health care institution after the patient received outpatient services from the receiving licensed health care institution.
209. "Treatment" means a procedure or method to cure, improve, or palliate an individual's medical condition or behavioral health issue.
210. "Treatment plan" means a description of the specific physical health services or behavioral health services that a health care institution anticipates providing to a patient.
211. "Unclassified health care institution" means a health care institution not classified or subclassified in statute or in rule.
212. "Vascular access" means the point on a patient's body where blood lines are connected for hemodialysis.
213. "Volunteer" means an individual authorized by a health care institution to work for the health care institution on a regular basis without compensation from the health care institution and does not include a medical staff member who has clinical privileges at the health care institution.
214. "Working day" means a Monday, Tuesday, Wednesday, Thursday, or Friday that is not a state and federal holiday or a statewide furlough day.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2). Amended by exempt rulemaking at 20 A.A.R. 3535, pursuant to Laws 2014, Ch. 233, § 5; effective January 1, 2015 (Supp. 14-4). Amended by exempt rulemaking at 22 A.A.R. 1035, pursuant to Laws 2015, Ch. 158, § 3; effective May 1, 2016 (Supp. 16-2).

R9-10-102. Health Care Institution Classes and Subclasses; Requirements

- A.** A person may apply for a license as a health care institution class or subclass in A.R.S. Title 36, Chapter 4 or this Chapter, or one of the following classes or subclasses:
- 1. General hospital,

2. Rural general hospital,
 3. Special hospital,
 4. Behavioral health inpatient facility,
 5. Nursing care institution,
 6. Recovery care center,
 7. Hospice inpatient facility,
 8. Hospice service agency,
 9. Behavioral health residential facility,
 10. Assisted living center,
 11. Assisted living home,
 12. Adult foster care home,
 13. Outpatient surgical center,
 14. Outpatient treatment center,
 15. Abortion clinic,
 16. Adult day health care facility,
 17. Home health agency,
 18. Substance abuse transitional facility,
 19. Behavioral health specialized transitional facility,
 20. Counseling facility,
 21. Adult behavioral health therapeutic home,
 22. Behavioral health respite home, or
 23. Unclassified health care institution.
- B.** A person shall apply for a license for the class or subclass that authorizes the provision of the highest level of physical care services or behavioral health services the proposed health care institution plans to provide. The Department shall review the proposed health care institution's scope of services to determine whether the requested health care institution class or subclass is appropriate.
- C.** A health care institution shall comply with the requirements in Article 17 of this Chapter if:
1. There are no specific rules in another Article of this Chapter for the health care institution's class or subclass, or
 2. The Department determines that the health care institution is an unclassified health care institution.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-103. Licensing Exceptions

- A.** A health care institution license is required for each health care institution facility except:
1. A facility exempt from licensing under A.R.S. § 36-402, or
 2. A health care institution's administrative office.
- B.** The Department does not require a separate health care institution license for:
1. A satellite facility of a hospital under A.R.S. § 36-422(F);
 2. An accredited facility of an accredited hospital under A.R.S. § 36-422(G);
 3. A facility operated by a licensed health care institution that is:
 - a. Adjacent to and contiguous with the licensed health care institution premises; or
 - b. Not adjacent to or contiguous with the licensed health care institution but connected to the licensed health care institution facility by an all-weather enclosure and:
 - i. Owned by the health care institution, or
 - ii. Leased by the health care institution with exclusive rights of possession;
 4. A mobile clinic operated by a licensed health care institution; or
 5. A facility located on grounds that are not adjacent to or contiguous with the health care institution premises where only ancillary services are provided to a patient of the health care institution.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-104. Approval of Architectural Plans and Specifications

- A.** For approval of architectural plans and specifications for the construction or modification of a health care institution that is required by this Chapter to comply with any of the physical plant codes and standards incorporated by reference in A.A.C. R9-1-412, an applicant shall submit to the Department an application packet including:

1. An application in a format provided by the Department that contains:
 - a. For construction of a new health care institution:
 - i. The health care institution's name, street address, city, state, zip code, telephone number, and e-mail address;
 - ii. The name and address of the health care institution's governing authority;
 - iii. The requested health care institution class or subclass; and
 - iv. If applicable, the requested licensed capacity, licensed occupancy, and dialysis stations for the health care institution;
 - b. For modification of a licensed health care institution:
 - i. The health care institution's license number,
 - ii. The name and address of the licensee,
 - iii. The health care institution's class or subclass, and
 - iv. The health care institution's existing licensed capacity, licensed occupancy, or dialysis stations; and the requested licensed capacity, licensed occupancy, or dialysis stations for the health care institution;
 - c. The health care institution's contact person's name, street address, city, state, zip code, telephone number, and e-mail address;
 - d. The name, street address, city, state, zip code, telephone number, and e-mail address of:
 - i. The project architect; or
 - ii. If the construction or modification of the health care institution does not require a project architect, the project engineer or other individual responsible for the completion of the construction or modification;
 - e. A narrative description of the project;
 - f. If providing or planning to provide medical services, nursing services, or health-related services that require compliance with specific physical plant codes and standards incorporated by reference in A.A.C. R9-1-412, the number of rooms or inpatient beds designated for providing the medical services, nursing services, or health-related services;
 - g. If providing or planning to provide behavioral health observation/stabilization services, the number of behavioral health observation/stabilization chairs designated for providing the behavioral health observation/stabilization services;
 - h. For construction of a new health care institution and if modification of a health care institution requires a project architect, a statement signed and sealed by the project architect, according to the requirements in 4 A.A.C. 30, Article 3, that the:
 - i. Project architect has complied with A.A.C. R4-30-301; and
 - ii. Architectural plans and specifications comply with applicable licensing requirements in A.R.S. Title 36, Chapter 4 and this Chapter;
 - i. If construction or modification of a health care institution requires a project engineer, a statement signed and sealed by the project engineer, according to the requirements in 4 A.A.C. 30, Article 3, that the project engineer has complied with A.A.C. R4-30-301; and
 - j. A statement signed by the governing authority or the licensee that the architectural plans and specifications comply with applicable licensing requirements in A.R.S. Title 36, Chapter 4 and this Chapter;
2. If the health care institution is located on land under the jurisdiction of a local governmental agency, one of the following:
 - a. A building permit for the construction or modification issued by the local governmental agency; or
 - b. If a building permit issued by the local governmental agency is not required, zoning clearance issued by the local governmental agency that includes:
 - i. The health care institution's name, street address, city, state, zip code, and county;
 - ii. The health care institution's class or subclass and each type of medical services, nursing services, or health-related services to be provided; and
 - iii. A statement signed by a representative of the local governmental agency stating that the address listed is zoned for the health care institution's class or subclass;
3. The following information that is necessary to demonstrate that the project described on the application complies with applicable codes and standards incorporated by reference in A.A.C. R9-1-412:
 - a. A table of contents containing:
 - i. The architectural plans and specifications submitted;
 - ii. The physical plant codes and standards incorporated by reference in A.A.C. R9-1-412 that apply to the project;
 - iii. The physical plant codes and standards that are required by a local governmental agency, if applicable;
 - iv. An index of the abbreviations and symbols used in the architectural plans and specifications; and

- v. The facility's specific International Building Code construction type and International Building Code occupancy type;
- b. If the facility is larger than 3,000 square feet and is or will be occupied by more than 20 individuals, the seal of an architect on the architectural plans and specifications according to the requirements in A.R.S. Title 32, Chapter 1 and 4 A.A.C. 30, Article 3;
- c. A site plan, drawn to scale, of the entire premises showing streets, property lines, facilities, parking areas, outdoor areas, fences, swimming pools, fire access roads, fire hydrants, and access to water mains;
- d. For each facility, on architectural plans and specifications:
 - i. A floor plan, drawn to scale, for each level of the facility, showing the layout and dimensions of each room, the name and function of each room, means of egress, and natural and artificial lighting sources;
 - ii. A diagram of a section of the facility, drawn to scale, showing the vertical cross-section view from foundation to roof and specifying construction materials;
 - iii. Building elevations, drawn to scale, showing the outside appearance of each facility;
 - iv. The materials used for ceilings, walls, and floors;
 - v. The location, size, and fire rating of each door and each window and the materials and hardware used, including safety features such as fire exit door hardware and fireproofing materials;
 - vi. A ceiling plan, drawn to scale, showing the layout of each light fixture, each fire protection device, and each element of the mechanical ventilation system;
 - vii. An electrical floor plan, drawn to scale, showing the wiring diagram and the layout of each lighting fixture, each outlet, each switch, each electrical panel, and electrical equipment;
 - viii. A mechanical floor plan, drawn to scale, showing the layout of heating, ventilation, and air conditioning systems;
 - ix. A plumbing floor plan, drawn to scale, showing the layout and materials used for water, sewer, and medical gas systems, including the water supply and plumbing fixtures;
 - x. A floor plan, drawn to scale, showing the communication system within the health care institution including the nurse call system, if applicable;
 - xi. A floor plan, drawn to scale, showing the automatic fire extinguishing, fire detection, and fire alarm systems; and
 - xii. Technical specifications or drawings describing installation of equipment or medical gas and the materials used for installation in the health care institution;
- 4. The estimated total project cost including the costs of:
 - a. Site acquisition,
 - b. General construction,
 - c. Architect fees,
 - d. Fixed equipment, and
 - e. Movable equipment;
- 5. The following, as applicable:
 - a. If the health care institution is located on land under the jurisdiction of a local governmental agency, one of the following provided by the local governmental agency:
 - i. A copy of the certificate of occupancy for the facility,
 - ii. Documentation that the facility was approved for occupancy, or
 - iii. Documentation that a certificate of occupancy for the facility is not available;
 - b. A certification and a statement that the construction or modification of the facility is in substantial compliance with applicable licensing requirements in A.R.S. Title 36, Article 4 and this Chapter signed by the project architect, the contractor, and the owner;
 - c. A written description of any work necessary to complete the construction or modification submitted by the project architect;
 - d. If the construction or modification affects the health care institution's fire alarm system, a contractor certification and description of the fire alarm system in a format provided by the Department;
 - e. If the construction or modification affects the health care institution's automatic fire extinguishing system, a contractor certification of the automatic fire extinguishing system in a format provided by the Department;
 - f. If the construction or modification affects the health care institution's heating, ventilation, or air conditioning system, a copy of the heating, ventilation, air conditioning, and air balance tests and a contractor certification of the heating, ventilation, or air conditioning system;
 - g. If draperies, cubicle curtains, or floor coverings are installed or replaced, a copy of the manufacturer's certification of flame spread for the draperies, cubicle curtains, or floor coverings;

- h. For a health care institution using inhalation anesthetics or nonflammable medical gas, a copy of the Compliance Certification for Inhalation Anesthetics or Nonflammable Medical Gas System required in the National Fire Codes incorporated by reference in A.A.C. R9-1-412;
 - i. If a generator is installed, a copy of the installation acceptance required in the National Fire Codes incorporated by reference in A.A.C. R9-1-412;
 - j. If equipment is installed, a certification from an engineer or from a technical representative of the equipment's manufacturer that the equipment has been installed according to the manufacturer's recommendations and, if applicable, calibrated;
 - k. For a health care institution providing radiology, a written report from a certified health physicist of the location, type, and amount of radiation protection; and
 - l. If a factory-built building is used by a health care institution:
 - i. A copy of the installation permit and the copy of a certificate of occupancy for the factory-built building from the Office of Manufactured Housing; or
 - ii. A written report from an individual registered as an architect or a professional structural engineer under 4 A.A.C. 30, Article 2, stating that the factory-built building complies with applicable design standards;
6. For construction of a new health care institution and for a modification of a health care institution that requires a project architect, a statement signed by the project architect that final architectural plans and specifications have been submitted to the person applying for a health care institution license or the licensee of the health care institution;
 7. For modification of a health care institution that does not require a project architect, a statement signed by the project engineer or other individual responsible for the completion of the modification that final architectural plans and specifications have been submitted to the person applying for a health care institution license or the licensee of the health care institution; and
 8. The applicable fee required by R9-10-106.
- B.** Before an applicant submits an application for approval of architectural plans and specifications for the construction or modification of a health care institution, an applicant may request an architectural evaluation by submitting the documents in subsection (A)(3) to the Department.
 - C.** The Department may conduct on-site facility reviews during the construction or modification of a health care institution.
 - D.** The Department shall approve or deny an application for approval of architectural plans and specifications of a health care institution in this Section according to R9-10-108.
 - E.** In addition to obtaining an approval of a health care institution's architectural plans and specifications, a person shall obtain a health care institution license before operating the health care institution.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-105. Initial License Application

- A.** A person applying for an initial health care institution license shall submit to the Department an application packet that contains:
 1. An application in a format provided by the Department including:
 - a. The health care institution's:
 - i. Name, street address, mailing address, telephone number, and e-mail address;
 - ii. Tax ID number; and
 - iii. Class or subclass listed in R9-10-102 for which licensing is requested;
 - b. Except for a home health agency, hospice service agency, or behavioral health facility, whether the health care institution is located within 1/4 mile of agricultural land;
 - c. Whether the health care institution is located in a leased facility;
 - d. Whether the health care institution is ready for a licensing inspection by the Department;
 - e. If the health care institution is not ready for a licensing inspection by the Department, the date the health care institution will be ready for a licensing inspection;
 - f. Whether the applicant agrees to allow the Department to submit supplemental requests for information under R9-10-108;
 - g. Owner information including:
 - i. The owner's name, address, telephone number, and e-mail address;
 - ii. Whether the owner is a sole proprietorship, a corporation, a partnership, a limited liability partnership, a limited liability company, or a governmental agency;
 - iii. If the owner is a partnership or a limited liability partnership, the name of each partner;

- iv. If the owner is a limited liability company, the name of the designated manager or, if no manager is designated, the names of any two members of the limited liability company;
- v. If the owner is a corporation, the name and title of each corporate officer;
- vi. If the owner is a governmental agency, the name and title of the individual in charge of the governmental agency or the name of an individual in charge of the health care institution designated in writing by the individual in charge of the governmental agency;
- vii. Whether the owner or any person with 10% or more business interest in the health care institution has had a license to operate a health care institution denied, revoked, or suspended; the reason for the denial, suspension, or revocation; the date of the denial, suspension, or revocation; and the name and address of the licensing agency that denied, suspended, or revoked the license;
- viii. Whether the owner or any person with 10% or more business interest in the health care institution has had a health care professional license or certificate denied, revoked, or suspended; the reason for the denial, suspension, or revocation; the date of the denial, suspension, or revocation; and the name and address of the licensing agency that denied, suspended, or revoked the license or certificate; and
- ix. The name, title, address, and telephone number of the owner's statutory agent or the individual designated by the owner to accept service of process and subpoenas;
- h. The name and address of the governing authority;
- i. The chief administrative officer's:
 - i. Name,
 - ii. Title,
 - iii. Highest educational degree, and
 - iv. Work experience related to the health care institution class or subclass for which licensing is requested; and
- j. Signature required in A.R.S. § 36-422(B);
- 2. If the health care institution is located in a leased facility, a copy of the lease showing the rights and responsibilities of the parties and exclusive rights of possession of the leased facility;
- 3. If applicable, a copy of the owner's articles of incorporation, partnership or joint venture documents, or limited liability documents;
- 4. If applicable, the name and address of each owner or lessee of any agricultural land regulated under A.R.S. § 3-365 and a copy of the written agreement between the applicant and the owner or lessee of agricultural land as prescribed in A.R.S. § 36-421(D);
- 5. Except for a home health agency or a hospice service agency, one of the following:
 - a. If the health care institution or a part of the health care institution is required by this Chapter to comply with any of the physical plant codes and standards incorporated by reference in A.A.C. R9-1-412, documentation of the health care institution's architectural plans and specifications approval in R9-10-104; or
 - b. If a health care institution or a part of the health care institution is not required by this Chapter to comply with any of the physical plant codes and standards incorporated by reference in A.A.C. R9-1-412:
 - i. One of the following:
 - (1) Documentation from the local jurisdiction of compliance with applicable local building codes and zoning ordinances; or
 - (2) If documentation from the local jurisdiction is not available, documentation of the unavailability of the local jurisdiction compliance and documentation of a general contractor's inspection of the facility that states the facility is safe for occupancy as the applicable health care institution class or subclass;
 - ii. The licensed capacity requested by the applicant for the health care institution;
 - iii. If applicable, the licensed occupancy requested by the applicant for the health care institution;
 - iv. A site plan showing each facility, the property lines of the health care institution, each street and walkway adjacent to the health care institution, parking for the health care institution, fencing and each gate on the health care institution premises, and, if applicable, each swimming pool on the health care institution premises; and
 - v. A floor plan showing, for each story of a facility, the room layout, room usage, each door and each window, plumbing fixtures, each exit, and the location of each fire protection device;
- 6. The health care institution's proposed scope of services; and
- 7. The applicable application fee required by R9-10-106.
- B.** In addition to the initial application requirements in this Section, an applicant shall comply with the supplemental application requirements in specific rules in this Chapter for the health care institution class or subclass for which licensing is requested.
- C.** The Department shall approve or deny an application in this Section according to R9-10-108.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-106. Fees

- A. An applicant who submits to the Department architectural plans and specifications for the construction or modification of a health care institution shall also submit an architectural drawing review fee as follows:
1. Fifty dollars for a project with a cost of \$100,000 or less;
 2. One hundred dollars for a project with a cost of more than \$100,000 but less than \$500,000; or
 3. One hundred fifty dollars for a project with a cost of \$500,000 or more.
- B. An applicant submitting an initial application or a renewal application for a health care institution license shall submit to the Department an application fee of \$50.
- C. Except as provided in subsection (D) or (E), an applicant submitting an initial application or a renewal application for a health care institution license shall submit to the Department a licensing fee as follows:
1. For an adult day health care facility, assisted living home, or assisted living center:
 - a. For a facility with no licensed capacity, \$280;
 - b. For a facility with a licensed capacity of one to 59 beds, \$280, plus the licensed capacity times \$70;
 - c. For a facility with a licensed capacity of 60 to 99 beds, \$560, plus the licensed capacity times \$70;
 - d. For a facility with a licensed capacity of 100 to 149 beds, \$840, plus the licensed capacity times \$70; or
 - e. For a facility with a licensed capacity of 150 beds or more, \$1,400, plus the licensed capacity times \$70;
 2. For a behavioral health facility:
 - a. For a facility with no licensed capacity, \$375;
 - b. For a facility with a licensed capacity of one to 59 beds, \$375, plus the licensed capacity times \$94;
 - c. For a facility with a licensed capacity of 60 to 99 beds, \$750, plus the licensed capacity times \$94;
 - d. For a facility with a licensed capacity of 100 to 149 beds, \$1,125, plus the licensed capacity times \$94; or
 - e. For a facility with a licensed capacity of 150 beds or more, \$1,875, plus the licensed capacity times \$94;
 3. For a behavioral health facility providing behavioral health observation/stabilization services, in addition to the applicable fee in subsection (C)(2), the licensed occupancy times \$94;
 4. For a nursing care institution:
 - a. For a facility with a licensed capacity of one to 59 beds, \$290, plus the licensed capacity times \$73;
 - b. For a facility with a licensed capacity of 60 to 99 beds, \$580, plus the licensed capacity times \$73;
 - c. For a facility with a licensed capacity of 100 to 149 beds, \$870, plus the licensed capacity times \$73; or
 - d. For a facility with a licensed capacity of 150 beds or more, \$1,450, plus the licensed capacity times \$73;
 5. For a hospital, a home health agency, a hospice service agency, a hospice inpatient facility, an abortion clinic, a recovery care center, an outpatient surgical center, an outpatient treatment center that is not a behavioral health facility, or an unclassified health care institution:
 - a. For a facility with no licensed capacity, \$365;
 - b. For a facility with a licensed capacity of one to 59 beds, \$365, plus the licensed capacity times \$91;
 - c. For a facility with a licensed capacity of 60 to 99 beds, \$730, plus the licensed capacity times \$91;
 - d. For a facility with a licensed capacity of 100 to 149 beds, \$1,095, plus the licensed capacity times \$91; or
 - e. For a facility with a licensed capacity of 150 beds or more, \$1,825, plus the licensed capacity times \$91;
 6. For a hospital providing behavioral health observation/stabilization services, in addition to the applicable fee in subsection (C)(5), the licensed occupancy times \$91; and
 7. For an outpatient treatment center that is not a behavioral health facility and provides:
 - a. Dialysis services, in addition to the applicable fee in subsection (C)(5), the number of dialysis stations times \$91; and
 - b. Behavioral health observation/stabilization services, in addition to the applicable fee in subsection (C)(5), the licensed occupancy times \$91.
- D. In addition to the applicable fees in subsections (C)(5) and (C)(6), an applicant submitting an initial application or a renewal application for a single group hospital license shall submit to the Department an additional fee of \$365 for each of the hospital's satellite facilities and, if applicable, the fees required in subsection (C)(7).
- E. Subsections (C) and (D) do not apply to a health care institution operated by a state agency according to state or federal law or to an adult foster care home.
- F. All fees are nonrefundable except as provided in A.R.S. § 41-1077.

Historical Note

New Section R9-10-106 renumbered from R9-10-122 and amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to

R9-10-107. Renewal License Application

- A.** A licensee applying to renew a health care institution license shall submit an application packet to the Department at least 60 calendar days but not more than 120 calendar days before the expiration date of the current license that contains:
1. A renewal application in a format provided by the Department including:
 - a. The health care institution's:
 - i. Name, license number, mailing address, telephone number, and e-mail address; and
 - ii. Class or subclass;
 - b. Whether the applicant agrees to allow the Department to submit supplemental requests for information under R9-10-108;
 - c. Owner information including:
 - i. The owner's name, address, telephone number, and e-mail address;
 - ii. Whether the owner is a sole proprietorship, a corporation, a partnership, a limited liability partnership, a limited liability company, or a governmental agency;
 - iii. If the owner is a partnership or a limited liability partnership, the name of each partner;
 - iv. If the owner is a limited liability company, the name of the designated manager or, if no manager is designated, the names of any two members of the limited liability company;
 - v. If the owner is a corporation, the name and title of each corporate officer;
 - vi. If the owner is a governmental agency, the name and title of the individual in charge of the governmental agency or the individual designated in writing by the individual in charge of the governmental agency;
 - vii. Whether the owner or any person with 10% or more business interest in the health care institution has had a license to operate a health care institution denied, revoked, or suspended since the previous license application was submitted; the reason for the denial, suspension, or revocation; the date of the denial, suspension, or revocation; and the name and address of the licensing agency that denied, suspended, or revoked the license;
 - viii. Whether the owner or any person with 10% or more business interest in the health care institution has had a health care professional license or certificate denied, revoked, or suspended since the previous license application was submitted; the reason for the denial, suspension, or revocation; the date of the denial, suspension, or revocation; and the name and address of the licensing agency that denied, suspended, or revoked the license or certificate; and
 - ix. The name, title, address, and telephone number of the owner's statutory agent or the individual designated by the owner to accept service of process and subpoenas;
 - d. The name and address of the governing authority;
 - e. The chief administrative officer's:
 - i. Name,
 - ii. Title,
 - iii. Highest educational degree, and
 - iv. Work experience related to the health care institution class or subclass for which licensing is requested; and
 - f. Signature required in A.R.S. § 36-422(B);
 2. The health care institution's scope of services;
 3. If the health care institution is located in a leased facility, a copy of the lease showing the rights and responsibilities of the parties and exclusive rights of possession of the leased facility; and
 4. The applicable application and licensing fees required by R9-10-106.
- B.** A licensee may submit a health care institution's current accreditation report from a nationally recognized accrediting organization as part of the application packet in subsection (A).
- C.** If a licensee submits a health care institution's current accreditation report from a nationally recognized accrediting organization, the Department shall not conduct an onsite compliance inspection of the health care institution during the time the accreditation report is valid.
- D.** The Department shall approve or deny a renewal license according to R9-10-108.
- E.** The Department shall issue a renewal license for:
1. One year; or
 2. Three years, if:
 - a. A licensee's health care institution is a hospital accredited by a nationally recognized accreditation organization, and
 - b. The licensee submits a copy of the hospital's current accreditation report.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by

exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-108. Time-frames

- A.** The overall time-frame for each type of approval granted by the Department is listed in Table 1.1. The applicant and the Department may agree in writing to extend the substantive review time-frame and the overall time-frame. The substantive review time-frame and the overall time-frame may not be extended by more than 25% of the overall time-frame.
- B.** The administrative completeness review time-frame for each type of approval granted by the Department as prescribed in this Article is listed in Table 1.1. The administrative completeness review time-frame begins on the date the Department receives an application packet or a written request for a change in a health care institution license according to R9-10-109(F):
1. The application packet for an initial health care institution license is not complete until the applicant provides the Department with written notice that the health care institution is ready for a licensing inspection by the Department.
 2. If the application packet or written request is incomplete, the Department shall provide a written notice to the applicant specifying the missing document or incomplete information. The administrative completeness review time-frame and the overall time-frame are suspended from the date of the notice until the date the Department receives the missing document or information from the applicant.
 3. When an application packet or written request is complete, the Department shall provide a written notice of administrative completeness to the applicant.
 4. For an initial health care institution application, the Department shall consider the application withdrawn if the applicant fails to supply the missing documents or information included in the notice described in subsection (B)(2) within 180 calendar days after the date of the notice described in subsection (B)(2).
 5. If the Department issues a license or grants an approval during the time provided to assess administrative completeness, the Department shall not issue a separate written notice of administrative completeness.
- C.** The substantive review time-frame is listed in Table 1.1 and begins on the date of the notice of administrative completeness.
1. The Department may conduct an onsite inspection of the facility:
 - a. As part of the substantive review for approval of architectural plans and specifications;
 - b. As part of the substantive review for issuing a health care institution initial or renewal license; or
 - c. As part of the substantive review for approving a modification in a health care institution's license.
 2. During the substantive review time-frame, the Department may make one comprehensive written request for additional information or documentation. If the Department and the applicant agree in writing, the Department may make supplemental requests for additional information or documentation. The time-frame for the Department to complete the substantive review is suspended from the date of a written request for additional information or documentation until the Department receives the additional information or documentation.
 3. The Department shall send a written notice of approval or a license to an applicant who is in substantial compliance with applicable requirements in A.R.S. Title 36, Chapter 4 and this Chapter.
 4. After an applicant for an initial health care institution license receives the written notice of approval in subsection (C)(3), the applicant shall submit the applicable license fee in R9-10-106 to the Department within 60 calendar days after the date of the written notice of approval.
 5. The Department shall provide a written notice of denial that complies with A.R.S. § 41-1076 to an applicant who does not:
 - a. For an initial health care institution application, submit the information or documentation in subsection (C)(2) within 120 calendar days after the Department's written request to the applicant;
 - b. Comply with the applicable requirements in A.R.S. Title 36, Chapter 4 and this Chapter; or
 - c. Submit the fee required in R9-10-106.
 6. An applicant may file a written notice of appeal with the Department within 30 calendar days after receiving the notice described in subsection (C)(5). The appeal shall be conducted according to A.R.S. Title 41, Chapter 6, Article 10.
 7. If a time-frame's last day falls on a Saturday, a Sunday, or an official state holiday, the Department shall consider the next working day to be the time-frame's last day.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by final rulemaking at 11 A.A.R. 859, effective April 2, 2005 (Supp. 05-1). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

Table 1.1.

Type of Approval	Statutory Authority	Overall Time-frame	Administrative Completeness Time-frame	Substantive Review Time-frame
Approval of architectural plans and specifications R9-10-104	A.R.S. §§ 36-405, 36-406(1)(b), and 36-421	105 calendar days	45 calendar days	60 calendar days
Health care institution initial license R9-10-105	A.R.S. §§ 36-405, 36-407, 36-421, 36-422, 36-424, and 36-425	120 calendar days	30 calendar days	90 calendar days
Health care institution renewal license R9-10-107	A.R.S. §§ 36-405, 36-407, 36-422, 36-424, and 36-425	90 calendar days	30 calendar days	60 calendar days
Approval of a modification of a health care institution R9-10-110	A.R.S. §§ 36-405, 36-407, and 36-422	75 calendar days	15 calendar days	60 calendar days

Historical Note

New Table 1 made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by final rulemaking at 11 A.A.R. 859, effective April 2, 2005 (Supp. 05-1). Table 1 title and contents amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Table 1.1 amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-109. Changes Affecting a License

- A.** A licensee shall ensure that the Department is notified in writing at least 30 calendar days before the effective date of:
1. A change in the name of:
 - a. A health care institution, or
 - b. The licensee; or
 2. A change in the address of a health care institution that does not provide medical services, nursing services, or health-related services on the premises.
- B.** If a licensee intends to terminate the operation of a health care institution either during or at the expiration of the health care institution's license, the licensee shall ensure that the Department is notified in writing of:
1. The termination of the health care institution's operations, as required in A.R.S. § 36-422(D), at least 30 calendar days before the termination, and
 2. The address and contact information for the location where the health care institution's medical records will be retained as required in A.R.S. § 12-2297.
- C.** If a licensee is an adult behavioral health therapeutic home or a behavioral health respite home, the licensee shall ensure that:
1. The Department is notified in writing if the licensee does not have a written agreement with a collaborating health care institution, as required in R9-10-1603(A)(4) or R9-10-1803(A)(5) as applicable; and
 2. The adult behavioral health therapeutic home or behavioral health respite home does not accept an individual as a resident or recipient, as applicable, or provide services to a resident or recipient, as applicable, until:
 - a. The adult behavioral health therapeutic home or behavioral health respite home has a written agreement with a collaborating health care institution;
 - b. The collaborating health care institution has approved the adult behavioral health therapeutic home's or behavioral health respite home's:
 - i. Scope of services, and
 - ii. Policies and procedures; and
 - c. The collaborating health care institution has verified the provider's skills and knowledge.
- D.** If a licensee is an affiliated outpatient treatment center, the licensee shall ensure that if the affiliated outpatient treatment center:
1. Plans to begin providing administrative support to a counseling facility at a time other than during the affiliated outpatient treatment center's initial or renewal license application process, the following information for each counseling facility is submitted to the Department before the affiliated outpatient treatment center begins providing administrative support:
 - a. The counseling facility's name,
 - b. The license number assigned to the counseling facility by the Department, and
 - c. The date the affiliated outpatient treatment center will begin providing administrative support to the counseling facility; or

2. No longer provides administrative support to a counseling facility previously identified by the affiliated outpatient treatment center as receiving administrative support from the affiliated outpatient treatment center, at a time other than during the initial or renewal license application process, the following information for each counseling facility is submitted to the Department within 30 calendar days after the affiliated outpatient treatment center no longer provides administrative support:
 - a. The counseling facility's name,
 - b. The license number assigned to the counseling facility by the Department, and
 - c. The date the affiliated outpatient treatment center stopped providing administrative support to the counseling facility.
- E.** If a licensee is a counseling facility, the licensee shall ensure that if the counseling facility:
1. Plans to begin receiving administrative support from an affiliated outpatient treatment center at a time other than during the counseling facility's initial or renewal license application process, the following information for the affiliated outpatient treatment center is submitted to the Department before the counseling facility begins receiving administrative support:
 - a. The affiliated outpatient treatment center's name,
 - b. The license number assigned to the affiliated outpatient treatment center by the Department, and
 - c. The date the counseling facility will begin receiving administrative support; or
 2. No longer receives administrative support from an affiliated outpatient treatment center previously identified by the counseling facility as providing administrative support to the counseling facility, at a time other than during the counseling facility's initial or renewal license application process, the following information for the affiliated outpatient treatment center is submitted to the Department within 30 calendar days after the counseling facility no longer receives administrative support from the affiliated outpatient treatment center:
 - a. The affiliated outpatient treatment center's name,
 - b. The license number assigned to the affiliated outpatient treatment center by the Department, and
 - c. The date the counseling facility stopped receiving administrative support from the affiliated outpatient treatment center.
 3. Plans to begin sharing administrative support with an affiliated counseling facility at a time other than during the counseling facility's initial or renewal license application process, the following information for each affiliated counseling facility sharing administrative support with the counseling facility is submitted to the Department before the counseling facility and affiliated counseling facility begin sharing administrative support:
 - a. The affiliated counseling facility's name,
 - b. The license number assigned to the affiliated counseling facility by the Department, and
 - c. The date the counseling facility and the affiliated counseling facility will begin sharing administrative support; or
 4. No longer shares administrative support with an affiliated counseling facility previously identified by the counseling facility as sharing administrative support with the counseling facility at a time other than during the counseling facility's initial or renewal license application process, the following information is submitted for each affiliated counseling facility within 30 calendar days after the counseling facility and affiliated counseling facility no longer share administrative support:
 - a. The affiliated counseling facility's name,
 - b. The license number assigned to the affiliated counseling facility by the Department, and
 - c. The date the counseling facility and affiliated counseling facility will no longer be sharing administrative support.
- F.** A governing authority shall submit an initial license application required in R9-10-105 for:
1. A change in ownership of a health care institution;
 2. A change in the address or location of a health care institution that provides medical services, nursing services, health-related services, or behavioral health services on the premises; or
 3. A change in a health care institution's class or subclass.
- G.** A governing authority is not required to submit documentation of a health care institution's architectural plans and specifications required in R9-10-105(A)(5) for an initial license application if:
1. The health care institution has not ceased operations for more than 30 calendar days,
 2. A modification has not been made to the health care institution,
 3. The services the health care institution is authorized by the Department to provide are not changed, and
 4. The location of the health care institution's premises is not changed.
- H.** The Department shall approve or deny a request for a change in services or another modification described in this Section according to R9-10-108.
- I.** A licensee shall not implement a change in services or another modification described in this Section until an approval or amended license is issued by the Department.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by

exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2). Amended by exempt rulemaking at 20 A.A.R. 3535, pursuant to Laws 2014, Ch. 233, § 5; effective January 1, 2015 (Supp. 14-4).

R9-10-110. Modification of a Health Care Institution

- A. A licensee of a health care institution that is required by this Chapter to comply with any of the physical plant codes and standards incorporated by reference in A.A.C. R9-1-412 shall submit an application for approval of architectural plans and specifications for a modification of the health care institution.
- B. A licensee of a health care institution shall submit a written request for a modification of the health care in a Department-provided format that contains:
 - 1. The health care institution's name, address, and license number;
 - 2. A narrative description of the modification;
 - 3. The name of the health care institution's administrator's or individual representing the health care institution as designated in A.R.S. § 36-422 and the dated signature of the administrator or individual; and
 - 4. One of the following:
 - a. For a health care institution that is required to comply with the physical plant codes and standards incorporated by reference in A.A.C. R9-10-412 for the building, documentation of the health care institution's architectural plans and specifications approval in R9-10-104; or
 - b. For a health care institution that is not required to comply with the physical plant codes and standards, documentation that demonstrates that the requested modification complies with applicable requirements in this Chapter.
- C. The Department shall approve or deny a request for a modification described in subsection (B) according to R9-10-108.
- D. A licensee shall not implement a modification described in subsection (B) until an approval or amended license is issued by the Department.

Historical Note

New Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Section R9-10-110 renumbered to Section R9-10-111; new Section R9-10-110 made by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-111. Enforcement Actions

- A. If the Department determines that an applicant or licensee is violating applicable statutes and rules and the violation poses a direct risk to the life, health, or safety of a patient, the Department may:
 - 1. Issue a provisional license to the applicant or licensee under A.R.S. § 36-425,
 - 2. Assess a civil penalty under A.R.S. § 36-431.01,
 - 3. Impose an intermediate sanction under A.R.S. § 36-427,
 - 4. Remove a licensee and appoint another person to continue operation of the health care institution pending further action under A.R.S. § 36-429,
 - 5. Suspend or revoke a license under A.R.S. § 36-427 and R9-10-111,
 - 6. Deny a license under A.R.S. § 36-425 and R9-10-111, or
 - 7. Issue an injunction under A.R.S. § 36-430.
- B. In determining which action in subsection (A) is appropriate, the Department shall consider the direct risk to the life, health, or safety of a patient in the health care institution based on:
 - 1. Repeated violations of statutes or rules,
 - 2. Pattern of violations,
 - 3. Types of violation,
 - 4. Severity of violation, and
 - 5. Number of violations.

Historical Note

Amended effective February 4, 1981 (Supp. 81-1). Section repealed; new Section made by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). Amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 97, effective January 1, 2014 (Supp. 13-4). Section R9-10-111 renumbered to Section R9-10-112; new Section R9-10-111 renumbered from R9-10-110 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-112. Denial, Revocation, or Suspension of License

- A. The Department may deny, revoke, or suspend a license to operate a health care institution if an applicant, a licensee, or a controlling person of the health care institution:

1. Provides false or misleading information to the Department;
 2. Has had in any state or jurisdiction any of the following:
 - a. An application or license to operate a health care institution denied, suspended, or revoked, unless the denial was based on failure to complete the licensing process within a required time-frame; or
 - b. A health care professional license or certificate denied, revoked, or suspended; or
 3. Has operated a health care institution, within the ten years preceding the date of the most recent license application, in violation of A.R.S. Title 36, Chapter 4 or this Chapter, that posed a direct risk to the life, health, or safety of a patient.
- B.** The Department shall suspend or revoke a hospital's license if the Department receives, pursuant to A.R.S. § 36-2901.08(H), notice from the Arizona Health Care Cost Containment System that the hospital's provider agreement registration with the Arizona Health Care Cost Containment System has been suspended or revoked.

Historical Note

Amended effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). New Section made by exempt rulemaking at 9 A.A.R. 526, effective April 1, 2003 (Supp. 03-1). Section R9-10-112 renumbered to R9-10-113; new Section R9-10-112 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Section R9-10-112 renumbered to Section R9-10-113; new Section R9-10-112 renumbered from R9-10-111 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-113. Tuberculosis Screening

A health care institution's chief administrative officer shall ensure that the health care institution complies with the following if tuberculosis screening is required at the health care institution:

1. For each individual required to be screened for infectious tuberculosis, the health care institution obtains from the individual:
 - a. On or before the date specified in the applicable Section of this Chapter, one of the following as evidence of freedom from infectious tuberculosis:
 - i. Documentation of a negative Mantoux skin test or other tuberculosis screening test recommended by the U.S. Centers for Disease Control and Prevention (CDC) administered within 12 months before the date the individual begins providing services at or on behalf of the health care institution or is admitted to the health care institution that includes the date and the type of tuberculosis screening test; or
 - ii. If the individual had a positive Mantoux skin test or other tuberculosis screening test, a written statement that the individual is free from infectious tuberculosis signed by a medical practitioner dated within 12 months before the date the individual begins providing services at or on behalf of the health care institution or is admitted to the health care institution; and
 - b. Every 12 months after the date of the individual's most recent tuberculosis screening test or written statement, one of the following as evidence of freedom from infectious tuberculosis:
 - i. Documentation of a negative Mantoux skin test or other tuberculosis screening test recommended by the CDC administered to the individual within 30 calendar days before or after the anniversary date of the most recent tuberculosis screening test or written statement that includes the date and the type of tuberculosis screening test; or
 - ii. If the individual has had a positive Mantoux skin test or other tuberculosis screening test, a written statement that the individual is free from infectious tuberculosis signed by a medical practitioner dated within 30 calendar days before or after the anniversary date of the most recent tuberculosis screening test or written statement; or
2. Establish, document, and implement a tuberculosis infection control program that complies with the Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-care Settings, 2005, published by the U.S. Department of Health and Human Services, Atlanta, GA 30333 and available at <http://www.cdc.gov/mmwr/PDF/RR/rr5417.pdf>, incorporated by reference, on file with the Department, and including no future editions or amendments and includes:
 - a. Conducting tuberculosis risk assessments, conducting tuberculosis screening testing, screening for signs or symptoms of tuberculosis, and providing training and education related to recognizing the signs and symptoms of tuberculosis; and
 - b. Maintaining documentation of any:
 - i. Tuberculosis risk assessment;
 - ii. Tuberculosis screening test of an individual who is employed by the health care institution, provides volunteer services for the health care institution, or is admitted to the health care institution; and

- iii. Screening for signs or symptoms of tuberculosis of an individual who is employed by the health care institution, provides volunteer services for the health care institution, or is admitted to the health care institution

Historical Note

Former Section R9-10-113 repealed, new Section R9-10-113 adopted effective February 4, 1981 (Supp. 81-1).

Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). New Section R9-10-113 renumbered from R9-10-112 and amended by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Section R9-10-113 renumbered to Section R9-10-114; new Section R9-10-113 renumbered from R9-10-112 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-114. Clinical Practice Restrictions for Hemodialysis Technician Trainees

A. The following definitions apply in this Section:

1. "Assess" means collecting data about a patient by:
 - a. Obtaining a history of the patient,
 - b. Listening to the patient's heart and lungs, and
 - c. Checking the patient for edema.
2. "Blood-flow rate" means the quantity of blood pumped into a dialyzer per minute of hemodialysis.
3. "Blood lines" means the tubing used during hemodialysis to carry blood between a vascular access and a dialyzer.
4. "Central line catheter" means a type of vascular access created by surgically implanting a tube into a large vein.
5. "Clinical practice restriction" means a limitation on the hemodialysis tasks that may be performed by a hemodialysis technician trainee.
6. "Conductivity test" means a determination of the electrolytes in a dialysate.
7. "Dialysate" means a mixture of water and chemicals used in hemodialysis to remove wastes and excess fluid from a patient's body.
8. "Dialysate-flow rate" means the quantity of dialysate pumped per minute of hemodialysis.
9. "Directly observing" or "direct observation" means a medical person stands next to an inexperienced hemodialysis technician trainee and watches the inexperienced hemodialysis technician trainee perform a hemodialysis task.
10. "Direct supervision" has the same meaning as "supervision" in A.R.S. § 36-401.
11. "Electrolytes" means chemical compounds that break apart into electrically charged particles, such as sodium, potassium, or calcium, when dissolved in water.
12. "Experienced hemodialysis technician trainee" means an individual who has passed all didactic, skills, and competency examinations provided by a health care institution that measure the individual's knowledge and ability to perform hemodialysis.
13. "Fistula" means a type of vascular access created by a surgical connection between an artery and vein.
14. "Fluid-removal rate" means the quantity of wastes and excess fluid eliminated from a patient's blood per minute of hemodialysis to achieve the patient's prescribed weight, determined by:
 - a. Dialyzer size,
 - b. Blood-flow rate,
 - c. Dialysate-flow rate, and
 - d. Hemodialysis duration.
15. "Germicide-negative test" means a determination that a chemical used to kill microorganisms is not present.
16. "Germicide-positive test" means a determination that a chemical used to kill microorganisms is present.
17. "Graft" means a vascular access created by a surgical connection between an artery and vein using a synthetic tube.
18. "Hemodialysis machine" means a mechanical pump that controls:
 - a. The blood-flow rate,
 - b. The mixing and temperature of dialysate,
 - c. The dialysate-flow rate,
 - d. The addition of anticoagulant, and
 - e. The fluid-removal rate.
19. "Hemodialysis technician" has the same meaning as in A.R.S. § 36-423(A).
20. "Hemodialysis technician trainee" means an individual who is working in a health care institution to assist in providing hemodialysis and who is not certified as a hemodialysis technician according to A.R.S. § 36-423(A).
21. "Inexperienced hemodialysis technician trainee" means an individual who has not passed all didactic, skills, and competency examinations provided by a health care institution that measure the individual's knowledge and ability to perform hemodialysis.

22. "Medical person" means:
 - a. A physician who is experienced in dialysis;
 - b. A registered nurse practitioner who is experienced in dialysis;
 - c. A nurse who is experienced in dialysis;
 - d. A hemodialysis technician who meets the requirements in A.R.S. § 36-423(A) approved by the governing authority; and
 - e. An experienced hemodialysis technician trainee approved by the governing authority.
23. "Not established" means not approved by a patient's nephrologist for use in hemodialysis.
24. "Patient" means an individual who receives hemodialysis.
25. "pH test" means a determination of the acidity of a dialysate.
26. "Preceptor course" means a health care institution's instruction and evaluation provided to a nurse, hemodialysis technician, or hemodialysis technician trainee that enables the nurse, hemodialysis technician, or hemodialysis technician trainee to provide direct observation and education to hemodialysis technician trainees.
27. "Respond" means to mute, shut off, reset, or troubleshoot an alarm.
28. "Safety check" means successful completion of tests recommended by the manufacturer of a hemodialysis machine, a dialyzer, or a water system used for hemodialysis before initiating a patient's hemodialysis.
29. "Water-contaminant test" means a determination of the presence of chlorine or chloramine in a water system used for hemodialysis.
- B.** An experienced hemodialysis technician trainee may:
 1. Perform hemodialysis under direct supervision, and
 2. Provide direct observation to another hemodialysis technician trainee only after completing the health care institution's preceptor course approved by the governing authority.
- C.** An experienced hemodialysis technician trainee shall not access a patient's:
 1. Fistula that is not established, or
 2. Graft that is not established.
- D.** An inexperienced hemodialysis technician trainee may perform the following hemodialysis tasks only under direct observation:
 1. Access a patient's central line catheter;
 2. Respond to a hemodialysis-machine alarm;
 3. Draw blood for laboratory tests;
 4. Perform a water-contaminant test on a water system used for hemodialysis;
 5. Inspect a dialyzer and perform a germicide-positive test before priming a dialyzer;
 6. Set up a hemodialysis machine and blood lines before priming a dialyzer;
 7. Prime a dialyzer;
 8. Test a hemodialysis machine for germicide presence;
 9. Perform a hemodialysis machine safety check;
 10. Prepare a dialysate;
 11. Perform a conductivity test and a pH test on a dialysate;
 12. Assess a patient;
 13. Check and record a patient's vital signs, weight, and temperature;
 14. Determine the amount and rate of fluid removal from a patient;
 15. Administer local anesthetic at an established fistula or graft, administer anticoagulant, or administer replacement saline solution;
 16. Perform a germicide-negative test on a dialyzer before initiating hemodialysis;
 17. Initiate or discontinue a patient's hemodialysis;
 18. Adjust blood-flow rate, dialysate-flow rate, or fluid-removal rate during hemodialysis; or
 19. Prepare a blood, water, or dialysate culture to determine microorganism presence.
- E.** An inexperienced hemodialysis technician trainee shall not:
 1. Access a patient's:
 - a. Fistula that is not established, or
 - b. Graft that is not established; or
 2. Provide direct observation.
- F.** When a hemodialysis technician trainee performs hemodialysis tasks for a patient, the patient's medical record shall include:
 1. The name of the hemodialysis technician trainee;
 2. The date, time, and hemodialysis task performed;
 3. The name of the medical person directly observing or the nurse or physician directly supervising the hemodialysis technician trainee; and
 4. The initials or signature of the medical person directly observing or the nurse or physician directly supervising the hemodialysis technician trainee.

- G. If the Department determines that a health care institution is not in substantial compliance with this Section, the Department may take enforcement action according to R9-10-110.

Historical Note

Former Section R9-10-114 repealed, new Section R9-10-114 adopted effective February 4, 1981 (Supp. 81-1). Amended by adding paragraph (7) as an emergency effective November 17, 1983 pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 83-6). Amended by adding paragraph (7) as a permanent amendment effective August 2, 1984 (Supp. 84-4). Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). New Section R9-10-114 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Section R9-10-114 renumbered to Section R9-10-115; new Section R9-10-114 renumbered from R9-10-113 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-115. Behavioral Health Paraprofessionals; Behavioral Health Technicians

If a health care institution is a behavioral health facility or is authorized by the Department to provide behavioral health services, an administrator shall ensure that:

1. Policies and procedures are established, documented, and implemented that:
 - a. Delineate the services a behavioral health paraprofessional is allowed to provide at or for the health care institution;
 - b. Cover supervision of a behavioral health paraprofessional including documentation of supervision;
 - c. Establish the qualifications for a behavioral health professional providing supervision to a behavioral health paraprofessional;
 - d. Delineate the services a behavioral health technician is allowed to provide at or for the health care institution;
 - e. Cover clinical oversight for a behavioral health technician, including documentation of clinical oversight;
 - f. Establish the qualifications for a behavioral health professional providing clinical oversight to a behavioral health technician;
 - g. Delineate the methods used to provide clinical oversight including when clinical oversight is provided on an individual basis or in a group setting;
 - h. Establish the process by which information pertaining to services provided by a behavioral health technician is provided to the behavioral health professional who is responsible for the clinical oversight of the behavioral health technician;
2. A behavioral health paraprofessional receives supervision according to policies and procedures;
3. Clinical oversight is provided to a behavioral health technician to ensure that patient needs are met based on, for each behavioral health technician:
 - a. The scope and extent of the services provided,
 - b. The acuity of the patients receiving services, and
 - c. The number of patients receiving services;
4. A behavioral health technician receives clinical oversight at least once during each two week period, if the behavioral health technician provides services related to patient care at the health care institution during the two week period;
5. When clinical oversight is provided electronically:
 - a. The clinical oversight is provided verbally with direct and immediate interaction between the behavioral health professional providing and the behavioral health technician receiving the clinical oversight,
 - b. A secure connection is used, and
 - c. The identities of the behavioral health professional providing and the behavioral health technician receiving the clinical oversight are verified before clinical oversight is provided; and
6. A behavioral health professional provides supervision to a behavioral health paraprofessional or clinical oversight to behavioral health technician within the behavioral health professional's scope of practice established in the applicable licensing requirements under A.R.S. Title 32.

Historical Note

Adopted effective February 4, 1981 (Supp. 81-1). Amended by final rulemaking 16 A.A.R. 688, effective November 1, 2010 (Supp. 10-2). Section repealed; new Section made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Section R9-10-115 renumbered to Section R9-10-116; new Section R9-10-115 renumbered from R9-10-114 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-116. Nutrition and Feeding Assistant Training Programs

- A. For the purposes of this Section, "agency" means an entity other than a nursing care institution that provides the nutrition and feeding assistant training required in A.R.S. § 36-413.
- B. An agency shall apply for approval to operate a nutrition and feeding assistant training program by submitting:

1. An application in a format provided by the Department that contains:
 - a. The name of the agency;
 - b. The name, telephone number, and e-mail address of the individual in charge of the proposed nutrition and feeding assistant training program;
 - c. The address where the nutrition and feeding assistant training program records are maintained;
 - d. A description of the training course being offered by the nutrition and feeding assistant training program including for each topic in subsection (I):
 - i. The information presented for each topic,
 - ii. The amount of time allotted to each topic,
 - iii. The skills an individual is expected to acquire for each topic, and
 - iv. The testing method used to verify an individual has acquired the stated skills for each topic;
 - e. Whether the agency agrees to allow the Department to submit supplemental requests for information as specified in subsection (F)(2); and
 - f. The signature of the individual in charge of the proposed nutrition and feeding assistant training program and the date signed; and
 2. A copy of the materials used for providing the nutrition and feeding assistant training program.
- C.** For an application for an approval of a nutrition and feeding assistant training program, the administrative review time-frame is 30 calendar days, the substantive review time-frame is 30 calendar days, and the overall time-frame is 60 calendar days.
- D.** Within 30 calendar days after the receipt of an application in subsection (B), the Department shall:
1. Issue an approval of the agency's nutrition and feeding assistant training program;
 2. Provide a notice of administrative completeness to the agency that submitted the application; or
 3. Provide a notice of deficiencies to the agency that submitted the application, including a list of the information or documents needed to complete the application.
- E.** If the Department provides a notice of deficiencies to an agency:
1. The administrative completeness review time-frame and the overall time-frame are suspended from the date of the notice of deficiencies until the date the Department receives the missing information or documents from the agency;
 2. If the agency does not submit the missing information or documents to the Department within 30 calendar days, the Department shall consider the application withdrawn; and
 3. If the agency submits the missing information or documents to the Department within 30 calendar days, the substantive review time-frame begins on the date the Department receives the missing information or documents.
- F.** Within the substantive review time-frame, the Department:
1. Shall issue or deny an approval of a nutrition and feeding assistant training program; and
 2. May make one written comprehensive request for more information, unless the Department and the agency agree in writing to allow the Department to submit supplemental requests for information.
- G.** If the Department issues a written comprehensive request or a supplemental request for information:
1. The substantive review time-frame and the overall time-frame are suspended from the date of the written comprehensive request or the supplemental request for information until the date the Department receives the information requested, and
 2. The agency shall submit to the Department the information and documents listed in the written comprehensive request or supplemental request for information within 10 working days after the date of the comprehensive written request or supplemental request for information.
- H.** The Department shall issue:
1. An approval for an agency to operate a nutrition and feeding assistant training program if the Department determines that the agency and the application complies with A.R.S. § 36-413 and this Section; or
 2. A denial for an agency that includes the reason for the denial and the process for appeal of the Department's decision if:
 - a. The Department determines that the agency does not comply with A.R.S. § 36-413 and this Section; or
 - b. The agency does not submit information and documents listed in the written comprehensive request or supplemental request for information within 10 working days after the date of the comprehensive written request or supplemental request for information.
- I.** An individual in charge of a nutrition and feeding assistant training program shall ensure that:
1. The materials and coursework for the nutrition and feeding assistant training program demonstrate includes the following topics:
 - a. Feeding techniques;
 - b. Assistance with feeding and hydration;
 - c. Communication and interpersonal skills;
 - d. Appropriate responses to resident behavior;
 - e. Safety and emergency procedures, including the Heimlich maneuver;

- f. Infection control;
 - g. Resident rights;
 - h. Recognizing a change in a resident that is inconsistent with the resident's normal behavior; and
 - i. Reporting a change in subsection (I)(1)(h) to a nurse at a nursing care institution;
2. An individual providing the training course is:
 - a. A physician,
 - b. A physician assistant,
 - c. A registered nurse practitioner,
 - d. A registered nurse,
 - e. A registered dietitian,
 - f. A licensed practical nurse,
 - g. A speech-language pathologist, or
 - h. An occupational therapist; and
 3. An individual taking the training course completes:
 - a. At least eight hours of classroom time, and
 - b. Demonstrates that the individual has acquired the skills the individual was expected to acquire.
- J.** An individual in charge of a nutrition and feeding assistant training program shall issue a certificate of completion to an individual who completes the training course and demonstrates the skills the individual was expected to acquire as a result of completing the training course that contains:
1. The name of the agency approved to operate the nutrition and feeding assistant training program;
 2. The name of the individual completing the training course;
 3. The date of completion;
 4. The name, signature, and professional license of the individual providing the training course; and
 5. The name and signature of the individual in charge of the nutrition and feeding assistant training program.
- K.** The Department may deny, revoke, or suspend an approval to operate a nutrition and feeding assistant training program if an agency operating or applying to operate a nutrition and feeding assistance training program:
1. Provides false or misleading information to the Department;
 2. Does not comply with the applicable statutes and rules;
 3. Issues a training completion certificate to an individual who did not:
 - a. Complete the nutrition and feeding assistant training program, or
 - b. Demonstrate the skills the individual was expected to acquire; or
 4. Does not implement the nutrition and feeding assistant training program as described in or use the materials submitted with the agency's application.
- L.** In determining which action in subsection (K) is appropriate, the Department shall consider the following:
1. Repeated violations of statutes or rules,
 2. Pattern of non-compliance,
 3. Types of violations,
 4. Severity of violations, and
 5. Number of violations.

Historical Note

Adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). New Section made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Section R9-10-116 renumbered to Section R9-10-117; new Section R9-10-116 renumbered from R9-10-115 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-117. Repealed

Historical Note

Adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3). New Section made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Section R9-10-117 renumbered to Section R9-10-118; new Section R9-10-117 renumbered from R9-10-116 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2). Repealed by exempt rulemaking at 20 A.A.R. 3535, pursuant to Laws 2014, Ch. 233, § 5; effective January 1, 2015 (Supp. 14-4).

R9-10-118. Collaborating Health Care Institution

- A.** An administrator of a collaborating health care institution shall ensure that:
1. A list is maintained of adult behavioral health therapeutic homes and behavioral health respite homes for which the collaborating health care institution serves as a collaborating health care institution;

2. For each adult behavioral health therapeutic home or behavioral health respite home in subsection (A)(1), the collaborating health care institution maintains the following information:
 - a. A copy of the documented agreement that establishes the responsibilities of the adult behavioral health therapeutic home or behavioral health respite home and the collaborating health care institution consistent with the requirements in this Chapter;
 - b. For the adult behavioral health therapeutic home or behavioral health respite home, the following information:
 - i. Provider's name;
 - ii. Street address;
 - iii. License number;
 - iv. Whether the residence is an adult behavioral health therapeutic home or a behavioral health respite home;
 - v. If the residence is a behavioral health respite home, whether the behavioral health respite home provides respite care services to:
 - (1) Individuals 18 years of age or older, or
 - (2) Individuals less than 18 years of age;
 - vi. The beginning and ending dates of the documented agreement in subsection (A)(2)(a); and
 - vii. The name and contact information for the individual assigned by the collaborating health care institution to monitor the adult behavioral health therapeutic home or behavioral health respite home;
 - c. For the adult behavioral health therapeutic home or behavioral health respite home, a copy of the following that have been approved by the collaborating health care institution:
 - i. Scope of services,
 - ii. Policies and procedures, and
 - iii. Documentation of the review and update of policies and procedures;
 - d. A description of the required skills and knowledge for a provider, based on the scope of services of the adult behavioral health therapeutic home or behavioral health respite home, as established by the collaborating health care institution; and
 - e. For a provider in the adult behavioral health therapeutic home or behavioral health respite home, documentation of:
 - i. The provider's skills and knowledge;
 - ii. If applicable, the provider's completion of training in assistance in the self-administration of medication;
 - iii. Verification of the provider's skills and knowledge; and
 - iv. If the provider is required to have clinical oversight according to R9-10-1805(C), the provider's receiving clinical oversight;
 3. A provider's skills and knowledge are verified by a personnel member according to policies and procedures;
 4. A provider who provides behavioral health services receives clinical oversight, required in R9-10-1805(C), from a behavioral health professional; and
 5. A provider, other than a provider who is a medical practitioner or nurse, receives training in assistance in the self-administration of medication:
 - a. From a medical practitioner or registered nurse or from a personnel member of the collaborating health care institution trained by a medical practitioner or registered nurse;
 - b. That includes:
 - i. A demonstration of the provider's skills and knowledge necessary to provide assistance in the self-administration of medication,
 - ii. Identification of medication errors and medical emergencies related to medication that require emergency medical intervention, and
 - iii. The process for notifying the appropriate entities when an emergency medical intervention is needed; and
 - c. That is documented.
- B.** For a patient referred to an adult behavioral health therapeutic home or a behavioral health respite home, an administrator shall ensure that:
1. A resident or recipient accepted by and receiving services from the adult behavioral health therapeutic home or behavioral health respite home does not present a threat to the referred patient, based on the resident's or recipient's developmental levels, social skills, verbal skills, and personal history;
 2. The referred patient does not present a threat to a resident or recipient accepted by and receiving services from the adult behavioral health therapeutic home or behavioral health respite home based the referred patient's developmental levels, social skills, verbal skills, and personal history;
 3. The referred patient requires services within the adult behavioral health therapeutic home's or behavioral health respite home's scope of services;

4. A provider of the adult behavioral health therapeutic home or behavioral health respite home has the verified skills and knowledge to provide behavioral health services to the referred patient;
 5. A treatment plan for the referred patient that includes information necessary for a provider to meet the referred patient's needs for behavioral health services is completed and forwarded to the provider before the referred patient is accepted as a resident or recipient;
 6. A patient's treatment plan is reviewed and updated at least once every twelve months and a copy of the patient's updated treatment plan is forwarded to the patient's provider;
 7. If documentation of a significant change in a patient's behavioral, physical, cognitive, or functional condition and the action taken by a provider to address patient's changing needs is received by the health care institution, a behavioral health professional or behavioral health technician reviews the documentation and:
 - a. Documents the review; and
 - b. If applicable:
 - i. Updates the patient's treatment plan, and
 - ii. Forwards the updated treatment plan to the provider within 10 working days after receipt of the documentation of a significant change;
 8. If the review and updated treatment plan required in subsection (7) is performed by a behavioral health technician, a behavioral health professional reviews and signs the review and updated treatment plan to ensure the patient is receiving the appropriate behavioral health services; and
 9. In addition to the requirements for a medical record for a patient in this Chapter, a referred patient's medical record contains:
 - a. The provider's name and the street address and license number of the adult behavioral health therapeutic home or behavioral health respite home to which the patient is referred,
 - b. A copy of the treatment plan provided to the adult behavioral health therapeutic home or behavioral health respite home,
 - c. Documentation received according to and required by subsection (7),
 - d. Any information about the patient received from the adult behavioral health therapeutic home or behavioral health respite home, and
 - e. Any follow-up actions taken by the collaborating health care institution related to the patient.
- C. For a patient referred to an adult behavioral health therapeutic home, an administrator shall ensure that the collaborating health care institution has documentation in the patient's medical record of evidence of freedom from infectious tuberculosis that meets the requirements in R9-10-113.

Historical Note

New Section R9-10-118 renumbered from R9-10-117 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-119. Abortion Reporting

- A. A licensed health care institution where abortions are performed shall submit to the Department, in a Department-provided format and according to A.R.S. § 36-2161(B) and (C), a report that contains the information required in A.R.S. § 36-2161(A) and the following:
 1. The final disposition of the fetal tissue from the abortion; and
 2. Except as provided in subsection (B), if custody of the fetal tissue is transferred to another person or persons:
 - a. The name and address of the person or persons accepting custody of the fetal tissue,
 - b. The amount of any compensation received by the licensed health care institution for the transferred fetal tissue, and
 - c. Whether a patient provided informed consent for the transfer of custody of the fetal tissue.
- B. A licensed health care institution where abortions are performed is not required to include the information specified in subsections (A)(2)(a) through (c) in the report required in subsection (A) if the licensed health care institution where abortions are performed:
 1. Transfers custody of the fetal tissue:
 - a. To a funeral establishment, as defined in A.R.S. § 32-1301;
 - b. To a crematory, as defined in A.R.S. § 32-1301; or
 - c. According to requirements in A.A.C. R18-13-1406, A.A.C. R18-13-1407, and A.A.C. R18-13-1408; or
 2. Complies with requirements in A.A.C. R18-13-1405.
- C. For purposes of this Section, the following definition applies: "Fetal tissue" means cells, or groups of cells with a specific function, obtained from an aborted human embryo or fetus.

Historical Note

New Section made by emergency rulemaking at 21 A.A.R. 1787, effective August 14, 2015 for 180 days (Supp. 15-3). Emergency expired February 10, 2016. Section amended by emergency rulemaking at 22 A.A.R. 420, effective February 11, 2016, for an additional 180 days; filed in the Office February 8, 2016 (Supp. 16-1).
New Section made by final rulemaking at 22 A.A.R. 1343, with an immediate effective date upon filing

under A.R.S. § 41-1032(A)(1) and (4) of May 5, 2016 (Supp. 16-2).

R9-10-120. Opioid Prescribing and Treatment

A. In addition to the definitions in A.R.S. § 36-401(A) and R9-10-101, the following definitions apply in this Section:

1. “Active malignancy” means a cancer for which:
 - a. A patient is undergoing treatment, such as through:
 - i. One or more surgical procedures to remove the cancer;
 - ii. Chemotherapy, as defined in A.A.C. R9-4-401; or
 - iii. Radiation treatment, as defined in A.A.C. R9-4-401;
 - b. There is no treatment; or
 - c. A patient is refusing treatment.
2. “Benzodiazepine” means any one of a class of sedative-hypnotic medications, characterized by a chemical structure that includes a benzene ring linked to a seven-membered ring containing two nitrogen atoms, that are commonly used in the treatment of anxiety.
3. “End-of-life” means that a patient has a documented life expectancy of six months or less.
4. “Episode of care” means medical services, nursing services, or health-related services provided by a health care institution to a patient for a specific period of time, ending in discharge or the completion of the patient’s treatment plan, whichever is later.
5. “Opioid” means a controlled substance, as defined in A.R.S. § 36-2501, that meets the definition of “opiate” in A.R.S. § 36-2501.
6. “Order” means to issue written, verbal, or electronic instructions for a specific dose of a specific medication in a specific quantity and route of administration to be obtained and administered to a patient in a health care institution.
7. “Prescribe” means to issue written or electronic instructions to a pharmacist to deliver to the ultimate user, or another individual on the ultimate user’s behalf, a specific dose of a specific medication in a specific quantity and route of administration.
8. “Sedative-hypnotic medication” means any one of several classes of drugs that have sleep-inducing, anti-anxiety, anti-convulsant, and muscle-relaxing properties.
9. “Short-acting opioid antagonist” means a drug approved by the U.S. Department of Health and Human Services, Food and Drug Administration, that, when administered, quickly but for a small period of time reverses, in whole or in part, the pharmacological effects of an opioid in the body.
10. “Substance use disorder” means a condition in which the misuse or dependence on alcohol or a drug results in adverse physical, mental, or social effects on an individual.
11. “Substance use risk” means an individual’s unique likelihood for addiction, misuse, diversion, or another adverse consequence resulting from the individual being prescribed or receiving treatment with opioids.
12. “Tapering” means the gradual reduction in the dosage of a medication administered to a patient, often with the intent of eventually discontinuing the use of the medication for the patient.

B. An administrator of a health care institution where opioids are prescribed or ordered as part of treatment shall:

1. Establish, document, and implement policies and procedures for prescribing or ordering an opioid as part of treatment, to protect the health and safety of a patient, that:
 - a. Cover which personnel members may prescribe or order an opioid in treating a patient and the required knowledge and qualifications of these personnel members;
 - b. As applicable and except when contrary to medical judgment for a patient, are consistent with the Arizona Opioid Prescribing Guidelines or national opioid-prescribing guidelines, such as guidelines developed by the:
 - i. Centers for Disease Control and Prevention, or
 - ii. U.S. Department of Veterans Affairs and the U.S. Department of Defense;
 - c. Include how, when, and by whom:
 - i. A patient’s profile on the Arizona Board of Pharmacy Controlled Substances Prescription Monitoring Program database is reviewed;
 - ii. An assessment is conducted of a patient’s substance use risk;
 - iii. The potential risks, adverse outcomes, and complications, including death, associated with the use of opioids are explained to a patient or the patient’s representative;
 - iv. Alternatives to a prescribed or ordered opioid are explained to a patient or the patient’s representative;
 - v. Informed consent is obtained from a patient or the patient’s representative and, if applicable, in what situations, described in subsection (F) or (G), informed consent would not be obtained before an opioid is prescribed or ordered for a patient;
 - vi. A patient receiving an opioid is monitored; and
 - vii. The actions taken according to subsections (B)(1)(c)(i) through (vi) are documented;
 - d. Address conditions that may impose a higher risk to a patient when prescribing or ordering an opioid as part of treatment, including:

- i. Concurrent use of a benzodiazepine or other sedative-hypnotic medication,
 - ii. History of substance use disorder,
 - iii. Co-occurring behavioral health issue, or
 - iv. Pregnancy;
 - e. Cover the criteria for co-prescribing a short-acting opioid antagonist for a patient;
 - f. Include that, if continuing control of a patient's pain after discharge is medically indicated due to the patient's medical condition, a method for continuing pain control will be addressed as part of discharge planning;
 - g. Include the frequency of the following for a patient being prescribed or ordered an opioid for longer than a 30-calendar-day period:
 - i. Face-to-face interactions with the patient,
 - ii. Conducting an assessment of a patient's substance use risk,
 - iii. Renewal of a prescription or order for an opioid without a face-to-face interaction with the patient, and
 - iv. Monitoring the effectiveness of the treatment;
 - h. If applicable according to A.R.S. § 36-2608, include documenting a dispensed opioid in the Arizona Board of Pharmacy Controlled Substances Prescription Monitoring Program database;
 - i. Cover the criteria and procedures for tapering opioid prescription or ordering as part of treatment; and
 - j. Cover the criteria and procedures for offering or referring a patient for treatment for substance use disorder;
 - 2. Include in the plan for the health care institution's quality management program a process for:
 - a. Review of known incidents of opioid-related adverse reactions or other negative outcomes a patient experiences or opioid-related deaths; and
 - b. Surveillance and monitoring of adherence to the policies and procedures in subsection (B)(1);
 - 3. Except as prohibited by Title 42 Code of Federal Regulations, Chapter I, Subchapter A, Part 2, or as provided in subsection (G), ensure that, if a patient's death may be related to an opioid prescribed or ordered as part of treatment, written notification, in a Department-provided format, is provided to the Department of the patient's death within one working day after the health care institution learns of the patient's death; and
 - 4. Ensure that informed consent required from a patient or the patient's representative includes:
 - a. The patient's:
 - i. Name,
 - ii. Date of birth or other patient identifier, and
 - iii. Condition for which opioids are being prescribed;
 - b. That an opioid being prescribed or ordered;
 - c. The potential risks, adverse reactions, complications, and medication interactions associated with the use of an opioid;
 - d. If applicable, the potential risks, adverse outcomes, and complications associated with the concurrent use of an opioid and a benzodiazepine or another sedative-hypnotic medication;
 - e. Alternatives to a prescribed opioid;
 - f. Name and signature of the individual explaining the use of an opioid to the patient; and
 - g. The signature of the patient or the patient's representative and the date signed.
- C. Except as provided in subsection (G), an administrator of a health care institution where opioids are prescribed as part of treatment shall ensure that a medical practitioner authorized by policies and procedures to prescribe an opioid in treating a patient:
1. Before prescribing an opioid for a patient of the health care institution:
 - a. Conducts a physical examination of the patient or reviews the documentation from a physical examination conducted during the patient's same episode of care;
 - b. Except as exempted by A.R.S. § 36-2606(G), reviews the patient's profile on the Arizona Board of Pharmacy Controlled Substances Prescription Monitoring Program database;
 - c. Conducts an assessment of the patient's substance use risk or reviews the documentation from an assessment of the patient's substance use risk conducted during the same episode of care by an individual licensed under A.R.S. Title 32 and authorized by policies and procedures to conduct an assessment of the patient's substance use risk;
 - d. Explains to the patient or the patient's representative the risks and benefits associated with the use of opioids or ensures that the patient or the patient's representative understands the risks and benefits associated with the use of opioids, as explained to the patient or the patient's representative by an individual licensed under A.R.S. Title 32 and authorized by policies and procedures to explain to the patient or the patient's representative the risks and benefits associated with the use of opioids;
 - e. Explains alternatives to a prescribed opioid; and
 - f. Obtains informed consent from the patient or the patient's representative that meets the requirements in subsection (B)(4), including the potential risks, adverse outcomes, and complications associated with the

- concurrent use of an opioid and a benzodiazepine or another sedative-hypnotic medication, if the patient:
 - i. Is also prescribed or ordered a sedative-hypnotic medication; or
 - ii. Has been prescribed a sedative-hypnotic medication by another medical practitioner;
 - 2. Includes the following information in the patient's medical record, an existing treatment plan, or a new treatment plan developed for the patient:
 - a. The patient's diagnosis;
 - b. The patient's medical history, including co-occurring disorders;
 - c. The opioid to be prescribed;
 - d. Other medications or herbal supplements being taken by the patient;
 - e. If applicable:
 - i. The effectiveness of the patient's current treatment,
 - ii. The duration of the current treatment, and
 - iii. Alternative treatments tried by or planned for the patient;
 - f. The expected benefit of the treatment and, if applicable, the benefit of the new treatment compared with continuing the current treatment; and
 - g. Other factors relevant to the patient's being prescribed an opioid; and
 - 3. If applicable, specifies in the patient's discharge plan how medically indicated pain control will occur after discharge to meet the patient's needs.
- D.** Except as provided in subsection (F) or (G), an administrator of a health care institution where opioids are ordered for administration to a patient in the health care institution as part of treatment shall ensure that a medical practitioner authorized by policies and procedures to order an opioid in treating a patient:
 - 1. Before ordering an opioid for a patient of the health care institution:
 - a. Conducts a physical examination of the patient or reviews the documentation from a physical examination conducted:
 - i. During the patient's same episode of care; or
 - ii. Within the previous 30 calendar days, at a healthcare institution transferring the patient to the health care institution or by the medical practitioner who referred the patient for admission to the health care institution;
 - b. Except as exempted by A.R.S. § 36-2606(G), reviews the patient's profile on the Arizona Board of Pharmacy Controlled Substances Prescription Monitoring Program database;
 - c. Conducts an assessment of the patient's substance use risk or reviews the documentation from an assessment of the patient's substance use risk conducted within the previous 30 calendar days by an individual licensed under A.R.S. Title 32 and authorized by policies and procedures to conduct an assessment of the patient's substance use risk;
 - d. Explains to the patient the risks and benefits associated with the use of opioids or ensures that the patient understands the risks and benefits associated with the use of opioids, as explained to the patient by an individual licensed under A.R.S. Title 32 and authorized by policies and procedures to explain to the patient the risks and benefits associated with the use of opioids;
 - e. If applicable, explains alternatives to a prescribed opioid; and
 - f. Obtains informed consent from the patient or the patient's representative, according to subsection (C)(1)(f); and
 - 2. Includes the following information in the patient's medical record, an existing treatment plan, or a new treatment plan developed for the patient:
 - a. The patient's diagnosis;
 - b. The patient's medical history, including co-occurring disorders;
 - c. The opioid being ordered and the reason for the order;
 - d. Other medications or herbal supplements being taken by the patient; and
 - e. If applicable:
 - i. The effectiveness of the patient's current treatment,
 - ii. The duration of the current treatment,
 - iii. Alternative treatments tried by or planned for the patient,
 - iv. The expected benefit of a new treatment compared with continuing the current treatment, and
 - v. Other factors relevant to the patient's being ordered an opioid.
- E.** For a health care institution where opioids are administered as part of treatment or where a patient is provided assistance in the self-administration of medication for a prescribed opioid, including a health care institution in which an opioid may be prescribed or ordered as part of treatment, an administrator, a manager as defined in R9-10-801, or a provider, as applicable to the health care institution, shall:
 - 1. Establish, document, and implement policies and procedures for administering an opioid as part of treatment or providing assistance in the self-administration of medication for a prescribed opioid, to protect the health and safety of a patient, that:

- a. Cover which personnel members may administer an opioid in treating a patient and the required knowledge and qualifications of these personnel members;
 - b. Cover which personnel members may provide assistance in the self-administration of medication for a prescribed opioid and the required knowledge and qualifications of these personnel members;
 - c. Include how, when, and by whom a patient's need for opioid administration is assessed;
 - d. Include how, when, and by whom a patient receiving an opioid is monitored; and
 - e. Cover how, when, and by whom the actions taken according to subsections (E)(1)(c) and (d) are documented;
- 2. Include in the plan for the health care institution's quality management program a process for:
 - a. Review of incidents of opioid-related adverse reactions or other negative outcomes a patient experiences or opioid-related deaths; and
 - b. Surveillance and monitoring of adherence to the policies and procedures in subsection (E)(1);
 - 3. Except as prohibited by Title 42 Code of Federal Regulations, Chapter I, Subchapter A, Part 2, or as provided in subsection (G)(1), ensure that, if a patient's death may be related to an opioid administered as part of treatment, written notification, in a Department-provided format, is provided to the Department of the patient's death within one working day after the patient's death; and
 - 4. Except as provided in subsection (G), ensure that an individual authorized by policies and procedures to administer an opioid in treating a patient or to provide assistance in the self-administration of medication for a prescribed opioid:
 - a. Before administering an opioid or providing assistance in the self-administration of medication for a prescribed opioid in compliance with an order as part of the treatment for a patient, identifies the patient's need for the opioid;
 - b. Monitors the patient's response to the opioid; and
 - c. Documents in the patient's medical record:
 - i. An identification of the patient's need for the opioid before the opioid was administered or assistance in the self-administration of medication for a prescribed opioid was provided, and
 - ii. The effect of the opioid administered or for which assistance in the self-administration of medication for a prescribed opioid was provided.
- F.** A medical practitioner authorized by a health care institution's policies and procedures to order an opioid in treating a patient is exempt from the requirements in subsection (D), if:
- 1. The health care institution's policies and procedures, required in subsection (B)(1) or the applicable Article in 9 A.A.C. 10, contain procedures for:
 - a. Providing treatment without obtaining the consent of a patient's or the patient's representative,
 - b. Ordering and administering opioids in an emergency situation, and
 - c. Complying with the requirements in subsection (D) after the emergency is resolved;
 - 2. The order for the administration of an opioid is:
 - a. Part of the treatment for a patient in an emergency, and
 - b. Issued in accordance with policies and procedures; and
 - 3. The emergency situation is documented in the patient's medical record.
- G.** The requirements in subsections (C), (D), and (E)(4), as applicable, do not apply to a health care institution's:
- 1. Prescribing, ordering, or administration of an opioid as part of treatment for a patient with an end-of-life condition or pain associated with an active malignancy;
 - 2. Prescribing an opioid as part of treatment for a patient when changing the type or dosage of an opioid, which had previously been prescribed by a medical practitioner of the health care institution for the patient according to the requirements in subsection (C):
 - a. Before a pharmacist dispenses the opioid to the patient; or
 - b. If changing the opioid because of an adverse reaction to the opioid experienced by the patient, within 72 hours after the opioid was dispensed for the patient by a pharmacist;
 - 3. Ordering an opioid as part of treatment for no longer than three calendar days for a patient remaining in the health care institution and receiving continuous medical services or nursing services from the health care institution; or
 - 4. Ordering an opioid as part of treatment:
 - a. For a patient receiving a surgical procedure or other invasive procedure; or
 - b. When changing the type, dosage, or route of administration of an opioid, which had previously been ordered by a medical practitioner of the health care institution for a patient according to the requirements in subsection (D), to meet the patient's needs.

Historical Note

New Section made by emergency rulemaking at 23 A.A.R. 2203, effective July 28, 2017, for 180 days (Supp. 17-3). Emergency expired; new Section renewed by emergency rulemaking at 24 A.A.R. 303, effective January 25, 2018, for 180 days; new Section made by final rulemaking at 24 A.A.R. 657, with an immediate

effective date of March 6, 2018 (Supp. 18-1).

R9-10-121. Repealed

Historical Note

Amended effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3).

R9-10-122. Repealed

Historical Note

New Section made by final rulemaking at 7 A.A.R. 2145, effective May 1, 2001 (Supp. 01-2). Amended by final rulemaking at 8 A.A.R. 3578, effective July 26, 2002 (Supp. 02-3). Amended by exempt rulemaking at 14 A.A.R. 3958, effective September 26, 2008 (Supp. 08-3). Amended by exempt rulemaking at 15 A.A.R. 2100, effective January 1, 2010 (Supp. 09-4). Section repealed by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).

R9-10-123. Repealed

Historical Note

Amended effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3).

R9-10-124. Repealed

Historical Note

Former Section R9-10-124 repealed, new Section R9-10-124 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 3559, effective August 1, 2002 (Supp. 02-3).

ATTACHMENT B

Statutory Authority for 9 A.A.C. 10, Article 1

36-132. Department of health services; functions; contracts

A. The department, in addition to other powers and duties vested in it by law, shall:

1. Protect the health of the people of the state.
2. Promote the development, maintenance, efficiency and effectiveness of local health departments or districts of sufficient population and area that they can be sustained with reasonable economy and efficient administration, provide technical consultation and assistance to local health departments or districts, provide financial assistance to local health departments or districts and services that meet minimum standards of personnel and performance and in accordance with a plan and budget submitted by the local health department or districts to the department for approval, and recommend the qualifications of all personnel.
3. Collect, preserve, tabulate and interpret all information required by law in reference to births, deaths and all vital facts, and obtain, collect and preserve information relating to the health of the people of this state and the prevention of diseases as may be useful in the discharge of functions of the department not in conflict with chapter 3 of this title and sections 36-693, 36-694 and 39-122.
4. Operate such sanitariums, hospitals or other facilities assigned to the department by law or by the governor.
5. Conduct a statewide program of health education relevant to the powers and duties of the department, prepare educational materials and disseminate information as to conditions affecting health, including basic information for the promotion of good health on the part of individuals and communities, and prepare and disseminate technical information concerning public health to the health professions, local health officials and hospitals. In cooperation with the department of education, the department of health services shall prepare and disseminate materials and give technical assistance for the purpose of education of children in hygiene, sanitation and personal and public health, and provide consultation and assistance in community organization to counties, communities and groups of people.
6. Administer or supervise a program of public health nursing, prescribe the minimum qualifications of all public health nurses engaged in official public health work, and encourage and aid in coordinating local public health nursing services.
7. Encourage and aid in coordinating local programs concerning control of preventable diseases in accordance with statewide plans that shall be formulated by the department.
8. Encourage and aid in coordinating local programs concerning maternal and child health, including midwifery, antepartum and postpartum care, infant and preschool health and the health of schoolchildren, including special fields such as the prevention of blindness and conservation of sight and hearing.
9. Encourage and aid in the coordination of local programs concerning nutrition of the people of this state.
10. Encourage, administer and provide dental health care services and aid in coordinating local programs concerning dental public health, in cooperation with the Arizona dental association. The department may bill and receive payment for costs associated with providing dental health care services and shall deposit the monies in the oral health fund established by section 36-138.
11. Establish and maintain adequate serological, bacteriological, parasitological, entomological and chemical laboratories with qualified assistants and facilities necessary for routine examinations and analyses and for investigations and research in matters affecting public health.
12. Supervise, inspect and enforce the rules concerning the operation of public bathing places and public and semipublic swimming pools adopted pursuant to section 36-136, subsection I, paragraph 10.
13. Take all actions necessary or appropriate to ensure that bottled water sold to the public and water used to process, store, handle, serve and transport food and drink are free from filth, disease-causing substances and organisms and unwholesome, poisonous, deleterious or other foreign substances. All state agencies and local health agencies involved with water quality shall provide to the department any assistance requested by the director to ensure that this paragraph is effectuated.
14. Enforce the state food, caustic alkali and acid laws in accordance with chapter 2, article 2 of this title, chapter 8, article 1 of this title and chapter 9, article 4 of this title, and collaborate in the enforcement of the federal food, drug, and cosmetic act (52 Stat. 1040; 21 United States Code sections 1 through 905).

15. Recruit and train personnel for state, local and district health departments.
 16. Conduct continuing evaluations of state, local and district public health programs, study and appraise state health problems and develop broad plans for use by the department and for recommendation to other agencies, professions and local health departments for the best solution of these problems.
 17. License and regulate health care institutions according to chapter 4 of this title.
 18. Issue or direct the issuance of licenses and permits required by law.
 19. Participate in the state civil defense program and develop the necessary organization and facilities to meet wartime or other disasters.
 20. Subject to the availability of monies, develop and administer programs in perinatal health care, including:
 - (a) Screening in early pregnancy for detecting high-risk conditions.
 - (b) Comprehensive prenatal health care.
 - (c) Maternity, delivery and postpartum care.
 - (d) Perinatal consultation, including transportation of the pregnant woman to a perinatal care center when medically indicated.
 - (e) Perinatal education oriented toward professionals and consumers, focusing on early detection and adequate intervention to avert premature labor and delivery.
 21. License and regulate the health and safety of group homes for persons with developmental disabilities. The department shall issue a license to an accredited facility for a period of the accreditation, except that no licensing period shall be longer than three years. The department is authorized to conduct an inspection of an accredited facility to ensure that the facility meets health and safety licensure standards. The results of the accreditation survey shall be public information. A copy of the final accreditation report shall be filed with the department of health services. For the purposes of this paragraph, "accredited" means accredited by a nationally recognized accreditation organization.
- B. The department may accept from the state or federal government, or any agency of the state or federal government, and from private donors, trusts, foundations or eleemosynary corporations or organizations grants or donations for or in aid of the construction or maintenance of any program, project, research or facility authorized by this title, or in aid of the extension or enforcement of any program, project or facility authorized, regulated or prohibited by this title, and enter into contracts with the federal government, or an agency of the federal government, and with private donors, trusts, foundations or eleemosynary corporations or organizations, to carry out such purposes. All monies made available under this section are special project grants. The department may also expend these monies to further applicable scientific research within this state.
- C. The department, in establishing fees authorized by this section, shall comply with title 41, chapter 6. The department shall not set a fee at more than the department's cost of providing the service for which the fee is charged. State agencies are exempt from all fees imposed pursuant to this section.
- D. The department may enter into contracts with organizations that perform nonrenal organ transplant operations and organizations that primarily assist in the management of end-stage renal disease and related problems to provide, as payors of last resort, prescription medications necessary to supplement treatment and transportation to and from treatment facilities. The contracts may provide for department payment of administrative costs it specifically authorizes.

36-136. Powers and duties of director; compensation of personnel; rules; definition

- A. The director shall:
1. Be the executive officer of the department of health services and the state registrar of vital statistics but shall not receive compensation for services as registrar.
 2. Perform all duties necessary to carry out the functions and responsibilities of the department.
 3. Prescribe the organization of the department. The director shall appoint or remove personnel as necessary for the efficient work of the department and shall prescribe the duties of all personnel. The director may abolish any office or position in the department that the director believes is unnecessary.
 4. Administer and enforce the laws relating to health and sanitation and the rules of the department.
 5. Provide for the examination of any premises if the director has reasonable cause to believe that on the premises there exists a violation of any health law or rule of this state.

6. Exercise general supervision over all matters relating to sanitation and health throughout this state. When in the opinion of the director it is necessary or advisable, a sanitary survey of the whole or of any part of this state shall be made. The director may enter, examine and survey any source and means of water supply, sewage disposal plant, sewerage system, prison, public or private place of detention, asylum, hospital, school, public building, private institution, factory, workshop, tenement, public washroom, public restroom, public toilet and toilet facility, public eating room and restaurant, dairy, milk plant or food manufacturing or processing plant, and any premises in which the director has reason to believe there exists a violation of any health law or rule of this state that the director has the duty to administer.

7. Prepare sanitary and public health rules.

8. Perform other duties prescribed by law.

B. If the director has reasonable cause to believe that there exists a violation of any health law or rule of this state, the director may inspect any person or property in transportation through this state, and any car, boat, train, trailer, airplane or other vehicle in which that person or property is transported, and may enforce detention or disinfection as reasonably necessary for the public health if there exists a violation of any health law or rule.

C. The director, after consultation with the department of administration, may take all necessary steps to enhance the highest and best use of the state hospital property, including contracting with third parties to provide services, entering into short-term lease agreements with third parties to occupy or renovate existing buildings and entering into long-term lease agreements to develop the land and buildings. The director shall deposit any monies collected from contracts and lease agreements entered into pursuant to this subsection in the Arizona state hospital charitable trust fund established by section 36-218. At least thirty days before issuing a request for proposals pursuant to this subsection, the department of health services shall hold a public hearing to receive community and provider input regarding the highest and best use of the state hospital property related to the request for proposals. The department shall report to the joint committee on capital review on the terms, conditions and purpose of any lease or sublease agreement entered into pursuant to this subsection relating to state hospital lands or buildings or the disposition of real property pursuant to this subsection, including state hospital lands or buildings, and the fiscal impact on the department and any revenues generated by the agreement. Any lease or sublease agreement entered into pursuant to this subsection relating to state hospital lands or buildings or the disposition of real property pursuant to this subsection, including state hospital lands or buildings, must be reviewed by the joint committee on capital review.

D. The director may deputize, in writing, any qualified officer or employee in the department to do or perform on the director's behalf any act the director is by law empowered to do or charged with the responsibility of doing.

E. The director may delegate to a local health department, county environmental department or public health services district any functions, powers or duties that the director believes can be competently, efficiently and properly performed by the local health department, county environmental department or public health services district if:

1. The director or superintendent of the local health agency, environmental agency or public health services district is willing to accept the delegation and agrees to perform or exercise the functions, powers and duties conferred in accordance with the standards of performance established by the director of the department of health services.

2. Monies appropriated or otherwise made available to the department for distribution to or division among counties or public health services districts for local health work may be allocated or reallocated in a manner designed to ensure the accomplishment of recognized local public health activities and delegated functions, powers and duties in accordance with applicable standards of performance. Whenever in the director's opinion there is cause, the director may terminate all or a part of any delegation and may reallocate all or a part of any funds that may have been conditioned on the further performance of the functions, powers or duties conferred.

F. The compensation of all personnel shall be as determined pursuant to section 38-611.

G. The director may make and amend rules necessary for the proper administration and enforcement of the laws relating to the public health.

H. Notwithstanding subsection I, paragraph 1 of this section, the director may define and prescribe emergency measures for detecting, reporting, preventing and controlling communicable or infectious diseases or conditions if the director has reasonable cause to believe that a serious threat to public health and welfare exists. Emergency measures are effective for no longer than eighteen months.

I. The director, by rule, shall:

1. Define and prescribe reasonably necessary measures for detecting, reporting, preventing and controlling communicable and preventable diseases. The rules shall declare certain diseases reportable. The rules shall prescribe measures, including isolation or quarantine, that are reasonably required to prevent the occurrence of, or to seek early detection and alleviation of, disability, insofar as possible, from communicable or preventable diseases. The rules shall include reasonably necessary measures to control animal diseases transmittable to humans.
2. Define and prescribe reasonably necessary measures, in addition to those prescribed by law, regarding the preparation, embalming, cremation, interment, disinterment and transportation of dead human bodies and the conduct of funerals, relating to and restricted to communicable diseases and regarding the removal, transportation, cremation, interment or disinterment of any dead human body.
3. Define and prescribe reasonably necessary procedures that are not inconsistent with law in regard to the use and accessibility of vital records, delayed birth registration and the completion, change and amendment of vital records.
4. Except as relating to the beneficial use of wildlife meat by public institutions and charitable organizations pursuant to title 17, prescribe reasonably necessary measures to ensure that all food or drink, including meat and meat products and milk and milk products sold at the retail level, provided for human consumption is free from unwholesome, poisonous or other foreign substances and filth, insects or disease-causing organisms. The rules shall prescribe reasonably necessary measures governing the production, processing, labeling, storing, handling, serving and transportation of these products. The rules shall prescribe minimum standards for the sanitary facilities and conditions that shall be maintained in any warehouse, restaurant or other premises, except a meat packing plant, slaughterhouse, wholesale meat processing plant, dairy product manufacturing plant or trade product manufacturing plant. The rules shall prescribe minimum standards for any truck or other vehicle in which food or drink is produced, processed, stored, handled, served or transported. The rules shall provide for the inspection and licensing of premises and vehicles so used, and for abatement as public nuisances of any premises or vehicles that do not comply with the rules and minimum standards. The rules shall provide an exemption relating to food or drink that is:
 - (a) Served at a noncommercial social event such as a potluck.
 - (b) Prepared at a cooking school that is conducted in an owner-occupied home.
 - (c) Not potentially hazardous and prepared in a kitchen of a private home for occasional sale or distribution for noncommercial purposes.
 - (d) Prepared or served at an employee-conducted function that lasts less than four hours and is not regularly scheduled, such as an employee recognition, an employee fund-raising or an employee social event.
 - (e) Offered at a child care facility and limited to commercially prepackaged food that is not potentially hazardous and whole fruits and vegetables that are washed and cut on-site for immediate consumption.
 - (f) Offered at locations that sell only commercially prepackaged food or drink that is not potentially hazardous.
 - (g) Baked and confectionary goods that are not potentially hazardous and that are prepared in a kitchen of a private home for commercial purposes if packaged with a label that clearly states the address of the maker, includes contact information for the maker, lists all the ingredients in the product and discloses that the product was prepared in a home. The label must be given to the final consumer of the product. If the product was made in a facility for individuals with developmental disabilities, the label must also disclose that fact. The person preparing the food or supervising the food preparation must obtain a food handler's card or certificate if one is issued by the local county and must register with an online registry established by the department pursuant to paragraph 13 of this subsection. For the purposes of this subdivision, "potentially hazardous" means baked and confectionary goods that meet the requirements of the food code published by the United States food and drug administration, as modified and incorporated by reference by the department by rule.
 - (h) A whole fruit or vegetable grown in a public school garden that is washed and cut on-site for immediate consumption.
5. Prescribe reasonably necessary measures to ensure that all meat and meat products for human consumption handled at the retail level are delivered in a manner and from sources approved by the Arizona department of agriculture and are free from unwholesome, poisonous or other foreign substances and filth, insects or disease-causing organisms. The rules shall prescribe standards for sanitary facilities to be used in identity, storage, handling and sale of all meat and meat products sold at the retail level.
6. Prescribe reasonably necessary measures regarding production, processing, labeling, handling, serving and transportation of bottled water to ensure that all bottled drinking water distributed for human consumption is free from unwholesome, poisonous, deleterious or other foreign substances and filth or disease-causing organisms. The rules shall

prescribe minimum standards for the sanitary facilities and conditions that shall be maintained at any source of water, bottling plant and truck or vehicle in which bottled water is produced, processed, stored or transported and shall provide for inspection and certification of bottled drinking water sources, plants, processes and transportation and for abatement as a public nuisance of any water supply, label, premises, equipment, process or vehicle that does not comply with the minimum standards. The rules shall prescribe minimum standards for bacteriological, physical and chemical quality for bottled water and for the submission of samples at intervals prescribed in the standards.

7. Define and prescribe reasonably necessary measures governing ice production, handling, storing and distribution to ensure that all ice sold or distributed for human consumption or for the preservation or storage of food for human consumption is free from unwholesome, poisonous, deleterious or other foreign substances and filth or disease-causing organisms. The rules shall prescribe minimum standards for the sanitary facilities and conditions and the quality of ice that shall be maintained at any ice plant, storage and truck or vehicle in which ice is produced, stored, handled or transported and shall provide for inspection and licensing of the premises and vehicles, and for abatement as public nuisances of ice, premises, equipment, processes or vehicles that do not comply with the minimum standards.

8. Define and prescribe reasonably necessary measures concerning sewage and excreta disposal, garbage and trash collection, storage and disposal, and water supply for recreational and summer camps, campgrounds, motels, tourist courts, trailer coach parks and hotels. The rules shall prescribe minimum standards for preparation of food in community kitchens, adequacy of excreta disposal, garbage and trash collection, storage and disposal and water supply for recreational and summer camps, campgrounds, motels, tourist courts, trailer coach parks and hotels and shall provide for inspection of these premises and for abatement as public nuisances of any premises or facilities that do not comply with the rules. Primitive camp and picnic grounds offered by this state or a political subdivision of this state are exempt from rules adopted pursuant to this paragraph but are subject to approval by a county health department under sanitary regulations adopted pursuant to section 36-183.02. Rules adopted pursuant to this paragraph do not apply to two or fewer recreational vehicles as defined in section 33-2102 that are not park models or park trailers, that are parked on owner-occupied residential property for less than sixty days and for which no rent or other compensation is paid. For the purposes of this paragraph, "primitive camp and picnic grounds" means camp and picnic grounds that are remote in nature and without accessibility to public infrastructure such as water, electricity and sewer.

9. Define and prescribe reasonably necessary measures concerning the sewage and excreta disposal, garbage and trash collection, storage and disposal, water supply and food preparation of all public schools. The rules shall prescribe minimum standards for sanitary conditions that shall be maintained in any public school and shall provide for inspection of these premises and facilities and for abatement as public nuisances of any premises that do not comply with the minimum standards.

10. Prescribe reasonably necessary measures to prevent pollution of water used in public or semipublic swimming pools and bathing places and to prevent deleterious health conditions at these places. The rules shall prescribe minimum standards for sanitary conditions that shall be maintained at any public or semipublic swimming pool or bathing place and shall provide for inspection of these premises and for abatement as public nuisances of any premises and facilities that do not comply with the minimum standards. The rules shall be developed in cooperation with the director of the department of environmental quality and shall be consistent with the rules adopted by the director of the department of environmental quality pursuant to section 49-104, subsection B, paragraph 12.

11. Prescribe reasonably necessary measures to keep confidential information relating to diagnostic findings and treatment of patients, as well as information relating to contacts, suspects and associates of communicable disease patients. In no event shall confidential information be made available for political or commercial purposes.

12. Prescribe reasonably necessary measures regarding human immunodeficiency virus testing as a means to control the transmission of that virus, including the designation of anonymous test sites as dictated by current epidemiologic and scientific evidence.

13. Establish an online registry of food preparers that are authorized to prepare food for commercial purposes pursuant to paragraph 4 of this subsection.

14. Prescribe an exclusion for fetal demise cases from the standardized survey known as "the hospital consumer assessment of healthcare providers and systems".

J. The rules adopted under the authority conferred by this section shall be observed throughout the state and shall be enforced by each local board of health or public health services district, but this section does not limit the right of any local board of health or county board of supervisors to adopt ordinances and rules as authorized by law within its jurisdiction,

provided that the ordinances and rules do not conflict with state law and are equal to or more restrictive than the rules of the director.

K. The powers and duties prescribed by this section do not apply in instances in which regulatory powers and duties relating to public health are vested by the legislature in any other state board, commission, agency or instrumentality, except that with regard to the regulation of meat and meat products, the department of health services and the Arizona department of agriculture within the area delegated to each shall adopt rules that are not in conflict.

L. The director, in establishing fees authorized by this section, shall comply with title 41, chapter 6. The department shall not set a fee at more than the department's cost of providing the service for which the fee is charged. State agencies are exempt from all fees imposed pursuant to this section.

M. After consultation with the state superintendent of public instruction, the director shall prescribe the criteria the department shall use in deciding whether or not to notify a local school district that a pupil in the district has tested positive for the human immunodeficiency virus antibody. The director shall prescribe the procedure by which the department shall notify a school district if, pursuant to these criteria, the department determines that notification is warranted in a particular situation. This procedure shall include a requirement that before notification the department shall determine to its satisfaction that the district has an appropriate policy relating to nondiscrimination of the infected pupil and confidentiality of test results and that proper educational counseling has been or will be provided to staff and pupils.

N. Until the department adopts exemptions by rule as required by subsection I, paragraph 4, subdivision (f) of this section, food and drink are exempt from the rules prescribed in subsection I of this section if offered at locations that sell only commercially prepackaged food or drink that is not potentially hazardous, without a limitation on its display area.

O. Until the department adopts exemptions by rule as required by subsection I, paragraph 4, subdivision (h) of this section, a whole fruit or vegetable grown in a public school garden that is washed and cut on-site for immediate consumption is exempt from the rules prescribed in subsection I of this section.

P. Until the department adopts an exclusion by rule as required by subsection I, paragraph 14 of this section, the standardized survey known as "the hospital consumer assessment of healthcare providers and systems" may not include patients who experience a fetal demise.

Q. For the purposes of this section, "fetal demise" means a fetal death that occurs or is confirmed in a licensed hospital. Fetal demise does not include an abortion as defined in section 36-2151.

36-405. Powers and duties of the director

A. The director shall adopt rules to establish minimum standards and requirements for the construction, modification and licensure of health care institutions necessary to ensure the public health, safety and welfare. The standards and requirements shall relate to the construction, equipment, sanitation, staffing for medical, nursing and personal care services, and recordkeeping pertaining to the administration of medical, nursing, behavioral health and personal care services, in accordance with generally accepted practices of health care. The director shall use the current standards adopted by the joint commission on accreditation of hospitals and the commission on accreditation of the American osteopathic association or those adopted by any recognized accreditation organization approved by the department as guidelines in prescribing minimum standards and requirements under this section.

B. The director, by rule, may:

1. Classify and subclassify health care institutions according to character, size, range of services provided, medical or dental specialty offered, duration of care and standard of patient care required for the purposes of licensure. Classes of health care institutions may include hospitals, infirmaries, outpatient treatment centers, health screening services centers and residential care facilities. Whenever the director reasonably deems distinctions in rules and standards to be appropriate among different classes or subclasses of health care institutions, the director may make such distinctions.
2. Prescribe standards for determining a health care institution's substantial compliance with licensure requirements.
3. Prescribe the criteria for the licensure inspection process.
4. Prescribe standards for the selection of health care-related demonstration projects.
5. Establish nonrefundable application and licensing fees for health care institutions, including a grace period and a fee for the late payment of licensing fees, and fees for architectural plans and specifications reviews.
6. Establish a process for the department to notify a licensee of the licensee's licensing fee due date.

7. Establish a process for a licensee to request a different licensing fee due date, including any limits on the number of requests by the licensee.

C. The director, by rule, shall adopt licensing provisions that facilitate the colocation and integration of outpatient treatment centers that provide medical, nursing and health-related services with behavioral health services consistent with article 3.1 of this chapter.

D. Ninety percent of the fees collected pursuant to this section shall be deposited, pursuant to sections 35-146 and 35-147, in the health services licensing fund established by section 36-414 and ten percent of the fees collected pursuant to this section shall be deposited, pursuant to sections 35-146 and 35-147, in the state general fund.

E. Subsection B, paragraph 5 of this section does not apply to a health care institution operated by a state agency pursuant to state or federal law or to adult foster care residential settings.

36-406. Powers and duties of the department

In addition to its other powers and duties:

1. The department shall:

(a) Administer and enforce this chapter and the rules, regulations and standards adopted pursuant thereto.

(b) Review, and may approve, plans and specifications for construction or modification or additions to health care institutions regulated by this chapter.

(c) Have access to books, records, accounts and any other information of any health care institution reasonably necessary for the purposes of this chapter.

(d) Require as a condition of licensure that nursing care institutions and assisted living facilities make vaccinations for influenza and pneumonia available to residents on site on a yearly basis. The department shall prescribe the manner by which the institutions and facilities shall document compliance with this subdivision, including documenting residents who refuse to be immunized. The department shall not impose a violation on a licensee for not making a vaccination available if there is a shortage of that vaccination in this state as determined by the director.

2. The department may:

(a) Make or cause to be made inspections consistent with standard medical practice of every part of the premises of health care institutions which are subject to the provisions of this chapter as well as those which apply for or hold a license required by this chapter.

(b) Make studies and investigations of conditions and problems in health care institutions, or any class or subclass thereof, as they relate to compliance with this chapter and rules, regulations and standards adopted pursuant thereto.

(c) Develop manuals and guides relating to any of the several aspects of physical facilities and operations of health care institutions or any class or subclass thereof for distribution to the governing authorities of health care institutions and to the general public.

36-407. Prohibited acts

A. A person shall not establish, conduct or maintain in this state a health care institution or any class or subclass of health care institution unless that person holds a current and valid license issued by the department specifying the class or subclass of health care institution the person is establishing, conducting or maintaining. The license is valid only for the establishment, operation and maintenance of the class or subclass of health care institution, the type of services and, except for emergency admissions as prescribed by the director by rule, the licensed capacity specified by the license.

B. The licensee shall not imply by advertising, directory listing or otherwise that the licensee is authorized to perform services more specialized or of a higher degree of care than is authorized by this chapter and the underlying rules for the particular class or subclass of health care institution within which the licensee is licensed.

C. The licensee may not transfer or assign the license. A license is valid only for the premises occupied by the institution at the time of its issuance.

D. The licensee shall not personally or through an agent offer or imply an offer of rebate or fee splitting to any person regulated by title 32 or chapter 17 of this title.

E. The licensee shall submit an itemized statement of charges to each patient.

36-413. Nutrition and feeding assistants; training programs; regulation; civil penalty; definition

A. The department may adopt rules to prescribe minimum standards for training programs for nutrition and feeding assistants in licensed skilled nursing facilities, including instructor qualifications, and may grant, deny, suspend and revoke approval of any training program that violates these standards. These standards must include:

1. Screening requirements.
2. Initial qualifications.
3. Continuing education requirements.
4. Testing requirements to assure competency.
5. Supervision requirements.
6. Requirements for additional training based on patient needs.
7. Maintenance of records.
8. Special feeding requirements based on level of care.

B. Pursuant to section 36-431.01, the department may impose a civil penalty on a training program that violates standards adopted by the department.

C. If the department adopts standards for training programs pursuant to subsection A of this section, the department, as part of its routine inspection of a health care facility that provides a training program, shall determine the facility's compliance with these standards.

D. For the purposes of this section, "nutrition and feeding assistant" has the same meaning as paid feeding assistant as defined in 42 Code of Federal Regulations part 483 and section 488.301.

36-421. Construction or modification of a health care institution

A. A license application for a health care institution shall include architectural plans and specifications or the department's approval of the architectural plans and specifications. These plans and specifications shall meet the minimum standards for licensure within the class or subclass of health care institution for which it is intended. The application shall include the name and address of each owner and lessee of any agricultural land that is regulated pursuant to section 3-365.

B. Construction or modification of a licensed health care institution shall meet the minimum standards for licensure within the class or subclass of health care institution for which it is intended.

C. An applicant shall comply with all state statutes and rules and local codes and ordinances required for the health care institution's construction.

D. A health care institution or its facility shall not be licensed if it is located on property that is less than four hundred feet from agricultural land that is regulated pursuant to section 3-365, except that the owner of the agricultural land may agree to comply with the buffer zone requirements of section 3-365. If the owner agrees in writing to comply with the buffer zone requirements and records the agreement in the office of the county recorder as a restrictive covenant running with the title to the land, the health care institution or facility may be licensed and located within the affected buffer zone. The agreement may include any stipulations regarding the health care institution or facility, including conditions for future expansion of the health care institution or facility and changes in the operational status of the health care institution or facility that will result in a breach of the agreement. This subsection does not apply to the issuance of a license for a health care institution located in the same location for which a health care institution license was previously issued.

E. Notwithstanding any law to the contrary, a health care institution that was licensed as a level 1 psychiatric acute behavioral health facility-inpatient facility as of January 1, 2012 and that is not certified under title XIX of the social security act shall be licensed as a hospital and is not required to comply with the physical plant standards for a general hospital, rural general hospital or special hospital prescribed by the department.

F. For the purposes of this section, health care institution does not include a home health agency or a hospice service agency.

36-422. Application for license; notification of proposed change in status; joint licenses; definitions

A. A person who wishes to apply for a license to operate a health care institution pursuant to this chapter shall submit to the department all of the following:

1. An application on a written or electronic form that is prescribed, prepared and furnished by the department that contains all of the following:

(a) The name and location of the health care institution.

(b) Whether the health care institution is to be operated as a proprietary or nonproprietary institution.

(c) The name of the governing authority. The applicant shall be the governing authority having the operative ownership of, or the governmental agency charged with the administration of, the health care institution sought to be licensed. If the applicant is a partnership that is not a limited partnership, the partners shall apply jointly, and the partners are jointly the governing authority for purposes of this article.

(d) The name and business or residential address of each controlling person and an affirmation that none of the controlling persons has been denied a license or certificate by a health profession regulatory board pursuant to title 32 or by a state agency pursuant to chapter 6, article 7 or chapter 17 of this title or a license to operate a health care institution in this state or another state or has had a license or certificate issued by a health profession regulatory board pursuant to title 32 or issued by a state agency pursuant to chapter 6, article 7 or chapter 17 of this title or a license to operate a health care institution revoked. If a controlling person has been denied a license or certificate by a health profession regulatory board pursuant to title 32 or by a state agency pursuant to chapter 6, article 7 or chapter 17 of this title or a license to operate a health care institution in this state or another state or has had a health care professional license or a license to operate a health care institution revoked, the controlling person shall include in the application a comprehensive description of the circumstances for the denial or the revocation.

(e) The class or subclass of health care institution to be established or operated.

(f) The types and extent of the health care services to be provided, including emergency services, community health services and services to indigent patients.

(g) The name and qualifications of the chief administrative officer implementing direction in that specific health care institution.

(h) Other pertinent information required by the department for the proper administration of this chapter and department rules.

2. The architectural plans and specifications or the department's approval of the architectural plans and specifications required by section 36-421, subsection A.

3. The applicable application fee.

B. An application submitted pursuant to this section shall contain the written or electronic signature of:

1. If the applicant is an individual, the owner of the health care institution.

2. If the applicant is a partnership, limited liability company or corporation, two of the officers of the corporation or managing members of the partnership or limited liability company or the sole member of the limited liability company if it has only one member.

3. If the applicant is a governmental unit, the head of the governmental unit.

C. An application for licensure shall be submitted at least sixty but not more than one hundred twenty days before the anticipated date of operation. An application for a substantial compliance survey submitted pursuant to section 36-425, subsection G shall be submitted at least thirty days before the date on which the substantial compliance survey is requested.

D. If a current licensee intends to terminate the operation of a licensed health care institution or if a change of ownership is planned, the current licensee shall notify the director in writing at least thirty days before the termination of operation or change in ownership is to take place. The current licensee is responsible for preventing any interruption of services required to sustain the life, health and safety of the patients or residents. A new owner shall not begin operating the health care institution until the director issues a license to the new owner.

E. A licensed health care institution for which operations have not been terminated for more than thirty days may be relicensed pursuant to the codes and standards for architectural plans and specifications that were applicable under its most recent license.

F. If a person operates a hospital in a county with a population of more than five hundred thousand persons in a setting that includes satellite facilities of the hospital that are located separately from the main hospital building, the department at the request of the applicant or licensee shall issue a single group license to the hospital and its designated satellite facilities located within one-half mile of the main hospital building if all of the facilities meet or exceed department licensure requirements for the designated facilities. At the request of the applicant or licensee, the department shall also issue a

single group license that includes the hospital and not more than ten of its designated satellite facilities that are located farther than one-half mile from the main hospital building if all of these facilities meet or exceed applicable department licensure requirements. Each facility included under a single group license is subject to the department's licensure requirements that are applicable to that category of facility. Subject to compliance with applicable licensure or accreditation requirements, the department shall reissue individual licenses for the facility of a hospital located in separate buildings from the main hospital building when requested by the hospital. This subsection does not apply to nursing care institutions and residential care institutions. The department is not limited in conducting inspections of an accredited health care institution to ensure that the institution meets department licensure requirements. If a person operates a hospital in a county with a population of five hundred thousand persons or less in a setting that includes satellite facilities of the hospital that are located separately from the main hospital building, the department at the request of the applicant or licensee shall issue a single group license to the hospital and its designated satellite facilities located within thirty-five miles of the main hospital building if all of the facilities meet or exceed department licensure requirements for the designated facilities. At the request of the applicant or licensee, the department shall also issue a single group license that includes the hospital and not more than ten of its designated satellite facilities that are located farther than thirty-five miles from the main hospital building if all of these facilities meet or exceed applicable department licensure requirements.

G. If a county with a population of more than one million persons or a special health care district in a county with a population of more than one million persons operates an accredited hospital that includes the hospital's accredited facilities that are located separately from the main hospital building and the accrediting body's standards as applied to all facilities meet or exceed the department's licensure requirements, the department shall issue a single license to the hospital and its facilities if requested to do so by the hospital. If a hospital complies with applicable licensure or accreditation requirements, the department shall reissue individual licenses for each hospital facility that is located in a separate building from the main hospital building if requested to do so by the hospital. This subsection does not limit the department's duty to inspect a health care institution to determine its compliance with department licensure standards. This subsection does not apply to nursing care institutions and residential care institutions.

H. An applicant or licensee must notify the department within thirty days after any change regarding a controlling person and provide the information and affirmation required pursuant to subsection A, paragraph 1, subdivision (d) of this section.

I. This section does not limit the application of federal laws and regulations to an applicant or licensee that is certified as a medicare or an Arizona health care cost containment system provider under federal law.

J. Except for an outpatient treatment center providing dialysis services or abortion procedures, a person wishing to begin operating an outpatient treatment center before a licensing inspection is completed shall submit all of the following:

1. The license application required pursuant to this section.
2. All applicable application and license fees.
3. A written request for a temporary license that includes:

(a) The anticipated date of operation.

(b) An attestation signed by the applicant that the applicant and the facility comply with and will continue to comply with the applicable licensing statutes and rules.

K. Within seven days after the department's receipt of the items required in subsection J of this section, but not before the anticipated operation date submitted pursuant to subsection C of this section, the department shall issue a temporary license that includes:

1. The name of the facility.
2. The name of the licensee.
3. The facility's class or subclass.
4. The temporary license's effective date.
5. The location of the licensed premises.

L. A facility may begin operating on the effective date of the temporary license.

M. The director may cease the issuance of temporary licenses at any time if the director believes that public health and safety is endangered.

N. For the purposes of this section:

1. "Accredited" means accredited by a nationally recognized accreditation organization.
2. "Satellite facility" means an outpatient facility at which the hospital provides outpatient medical services.

36-423. Hemodialysis technicians; minimum requirements; definition

- A. Except as provided in subsection B, beginning on April 1, 2003, a facility that provides hemodialysis treatment shall only use a hemodialysis technician who is certified by a national organization that certifies hemodialysis technicians.
- B. Beginning on April 1, 2003, an employee who provides hemodialysis treatment and who is not certified pursuant to subsection A is a hemodialysis technician trainee. A hemodialysis technician trainee may provide hemodialysis treatment in any facility unless the trainee fails to pass the national certification examination within two years after employment. The department of health services shall establish by rule appropriate clinical practice restrictions for hemodialysis technician trainees. An employee who is employed to provide hemodialysis treatment before April 1, 2003 must meet the requirements of this section on or before April 1, 2006.
- C. A facility that provides hemodialysis treatment must maintain the verification of certification in the hemodialysis technician's personnel file.
- D. For the purposes of this section, "hemodialysis technician" means a person who, under the direct supervision of a physician licensed pursuant to title 32, chapter 13 or 17, or a registered nurse licensed pursuant to title 32, chapter 15, provides assistance in the treatment of patients who receive dialysis treatment for end stage renal disease.

36-424. Inspections; suspension or revocation of license; report to board of examiners of nursing care institution administrators

- A. Subject to the limitation prescribed by subsection B of this section, the director shall inspect the premises of the health care institution and investigate the character and other qualifications of the applicant to ascertain whether the applicant and the health care institution are in substantial compliance with the requirements of this chapter and the rules established pursuant to this chapter. The director may prescribe rules regarding department background investigations into an applicant's character and qualifications.
- B. The director shall accept proof that a health care institution is an accredited hospital or is an accredited health care institution in lieu of all compliance inspections required by this chapter if the director receives a copy of the institution's accreditation report for the licensure period. If the health care institution's accreditation report is not valid for the entire licensure period, the department may conduct a compliance inspection of the health care institution during the time period the department does not have a valid accreditation report for the health care institution.
- C. On a determination by the director that there is reasonable cause to believe a health care institution is not adhering to the licensing requirements of this chapter, the director and any duly designated employee or agent of the director, including county health representatives and county or municipal fire inspectors, consistent with standard medical practices, may enter on and into the premises of any health care institution that is licensed or required to be licensed pursuant to this chapter at any reasonable time for the purpose of determining the state of compliance with this chapter, the rules adopted pursuant to this chapter and local fire ordinances or rules. Any application for licensure under this chapter constitutes permission for and complete acquiescence in any entry or inspection of the premises during the pendency of the application and, if licensed, during the term of the license. If an inspection reveals that the health care institution is not adhering to the licensing requirements established pursuant to this chapter, the director may take action authorized by this chapter. Any health care institution, including an accredited hospital, whose license has been suspended or revoked in accordance with this section is subject to inspection on application for relicensure or reinstatement of license.
- D. The director shall immediately report to the board of examiners of nursing care institution administrators information identifying that a nursing care institution administrator's conduct may be grounds for disciplinary action pursuant to section 36-446.07.

36-425. Inspections; issuance of license; posting requirements; provisional license; denial of license

- A. On receipt of a properly completed application for a health care institution license, the director shall conduct an inspection of the health care institution as prescribed by this chapter. If an application for a license is submitted due to a planned change of ownership, the director shall determine the need for an inspection of the health care institution. Based on the results of the inspection and after the submission of the applicable licensing fee, the director shall either deny the license or issue a regular or provisional license. A license issued by the department shall be posted in a conspicuous location in the reception area of that institution.

B. The director shall issue a license if the director determines that an applicant and the health care institution for which the license is sought substantially comply with the requirements of this chapter and rules adopted pursuant to this chapter and the applicant agrees to carry out a plan acceptable to the director to eliminate any deficiencies. The director shall not require a health care institution that was designated as a critical access hospital to make any modifications required by this chapter or rules adopted pursuant to this chapter in order to obtain an amended license with the same licensed capacity the health care institution had before it was designated as a critical access hospital if all of the following are true:

1. The health care institution has subsequently terminated its critical access hospital designation.
2. The licensed capacity of the health care institution does not exceed its licensed capacity before its designation as a critical access hospital.
3. The health care institution remains in compliance with the applicable codes and standards that were in effect at the time the facility was originally licensed with the higher licensed capacity.

C. A health care institution license does not expire and remains valid unless:

1. The department subsequently revokes or suspends the license.
2. The license is considered void because the licensee did not pay the licensing fee before the licensing fee due date.

D. Except as provided in section 36-424, subsection B and subsection E of this section, the department shall conduct a compliance inspection of a health care institution to determine compliance with this chapter and rules adopted pursuant to this chapter at least once annually.

E. If the department determines a facility to be deficiency free on a compliance survey, the department shall not conduct a compliance survey of that facility for twenty-four months after the date of the deficiency free survey. This subsection does not prohibit the department from enforcing licensing requirements as authorized by section 36-424.

F. A hospital licensed as a rural general hospital may provide intensive care services.

G. The director shall issue a provisional license for a period of not more than one year if an inspection or investigation of a currently licensed health care institution or a health care institution for which an applicant is seeking a license reveals that the institution is not in substantial compliance with department licensure requirements and the director believes that the immediate interests of the patients and the general public are best served if the institution is given an opportunity to correct deficiencies. The applicant or licensee shall agree to carry out a plan to eliminate deficiencies that is acceptable to the director. The director shall not issue consecutive provisional licenses to a single health care institution. The director shall not issue a license to the current licensee or a successor applicant before the expiration of the provisional license unless the health care institution submits an application for a substantial compliance survey and is found to be in substantial compliance. The director may issue a license only if the director determines that the institution is in substantial compliance with the licensure requirements of the department and this chapter. This subsection does not prevent the director from taking action to protect the safety of patients pursuant to section 36-427.

H. Subject to the confidentiality requirements of articles 4 and 5 of this chapter, title 12, chapter 13, article 7.1 and section 12-2235, the licensee shall keep current department inspection reports at the health care institution. Unless federal law requires otherwise, the licensee shall post in a conspicuous location a notice that identifies the location at that institution where the inspection reports are available for review.

I. A health care institution shall immediately notify the department in writing when there is a change of the chief administrative officer specified in section 36-422, subsection A, paragraph 1, subdivision (g).

J. When the department issues an original license or an original provisional license to a health care institution, it shall notify the owners and lessees of any agricultural land within one-fourth mile of the health care institution. The health care institution shall provide the department with the names and addresses of owners or lessees of agricultural land within one-fourth mile of the proposed health care institution.

K. In addition to the grounds for denial of licensure prescribed pursuant to subsection A of this section, the director may deny a license because an applicant or anyone in a business relationship with the applicant, including stockholders and controlling persons, has had a license to operate a health care institution denied, revoked or suspended or a license or certificate issued by a health profession regulatory board pursuant to title 32 or issued by a state agency pursuant to chapter 6, article 7 or chapter 17 of this title denied, revoked or suspended or has a licensing history of recent serious violations occurring in this state or in another state that posed a direct risk to the life, health or safety of patients or residents.

L. In addition to the requirements of this chapter, the director may prescribe by rule other licensure requirements.

36-427. Suspension or revocation; intermediate sanctions

A. The director, pursuant to title 41, chapter 6, article 10, may suspend or revoke, in whole or in part, the license of any health care institution if its owners, officers, agents or employees:

1. Violate this chapter or the rules of the department adopted pursuant to this chapter.
2. Knowingly aid, permit or abet the commission of any crime involving medical and health-related services.
3. Have been, are or may continue to be in substantial violation of the requirements for licensure of the institution, as a result of which the health or safety of one or more patients or the general public is in immediate danger.
4. Fail to comply with section 36-2901.08.
5. Violate section 36-2302.

B. If the licensee, the chief administrative officer or any other person in charge of the institution refuses to permit the department or its employees or agents the right to inspect the institution's premises as provided in section 36-424, such action shall be deemed reasonable cause to believe that a substantial violation under subsection A, paragraph 3 of this section exists.

C. If the director reasonably believes that a violation of subsection A, paragraph 3 of this section has occurred and that life or safety of patients will be immediately affected, the director, on written notice to the licensee, may order the immediate restriction of admissions or readmissions, selected transfer of patients out of the facility, reduction of capacity and termination of specific services, procedures, practices or facilities.

D. The director may rescind, in whole or in part, sanctions imposed pursuant to this section on correction of the violation or violations for which the sanctions were imposed.

36-429. Removal of licensee; temporary management continued operation

A. If the director reasonably believes that a violation of this chapter by a licensee endangers the health, safety or welfare of one or more of the licensee's patients, in addition to other remedies provided by this chapter, the director may enter into an agreement with the licensee or bring an action requesting the superior court to:

1. Remove the administrative officers, agents or employees of such licensee by injunction, enjoin the licensee from continued operation and revoke the license.
2. Appoint temporary personnel to continue operation of the health care institution under conditions and requirements set by the court pending correction of the violation and restoration of the licensee, revocation of the license or correction of the violation and change of ownership.

B. The action shall be brought in the name of the people of the state through the attorney general in the superior court in the county in which the health care institution is located.

36-430. Unlicensed operation prohibited; injunction

The operation or maintenance of a health care institution which does not hold a current and valid license or which exceeds the range of the services authorized by the class or subclass for which it is licensed is a violation of this chapter and is declared a nuisance inimical to the public health and safety. The director, in the name of the people of the state, through the attorney general, may bring an action for an injunction to restrain such violation or to enjoin the future operation or maintenance of any such health care institution until substantial compliance with the provisions of this chapter and the rules and regulations and standards adopted pursuant thereto is obtained.

36-2161. Abortions; reporting requirements

A. A hospital or facility in this state where abortions are performed must submit to the department of health services on a form prescribed by the department a report of each abortion performed in the hospital or facility. The report shall not identify the individual patient by name but must include the following information:

1. The name and address of the facility where the abortion was performed.
2. The type of facility where the abortion was performed.
3. The county where the abortion was performed.
4. The woman's age.
5. The woman's educational background by highest grade completed and, if applicable, level of college completed.
6. The county and state in which the woman resides.

7. The woman's race and ethnicity.
8. The woman's marital status.
9. The number of prior pregnancies and prior abortions of the woman.
10. The number of previous spontaneous terminations of pregnancy of the woman.
11. The gestational age of the unborn child at the time of the abortion.
12. The reason for the abortion, including whether the abortion is elective or due to maternal or fetal health considerations.
13. The type of procedure performed or prescribed and the date of the abortion.
14. Any preexisting medical conditions of the woman that would complicate pregnancy and any known medical complication that resulted from the abortion.
15. The basis for any medical judgment that a medical emergency existed that excused the physician from compliance with the requirements of this chapter.
16. The physician's statement if required pursuant to section 36-2301.01.
17. If applicable, the weight of the aborted fetus for any abortion performed pursuant to section 36-2301.01.
18. Whether a fetus or embryo was delivered alive as defined in section 36-2301 during or immediately after an attempted abortion and the efforts made to promote, preserve and maintain the life of the fetus or embryo pursuant to section 36-2301.
19. Statements by the physician and all clinical staff who observed the fetus or embryo during or immediately after the abortion certifying under penalty of perjury that, to the best of their knowledge, the aborted fetus or embryo was not delivered alive as defined in section 36-2301.

B. The report must be signed by the physician who performed the abortion or, if a health professional other than a physician is authorized by law to prescribe or administer abortion medication, the signature and title of the person who prescribed or administered the abortion medication. The form may be signed electronically and shall indicate that the person who signs the report is attesting that the information in the report is correct to the best of the person's knowledge. The hospital or facility must transmit the report to the department within fifteen days after the last day of each reporting month.

C. Any report filed pursuant to this section shall be filed electronically at an internet website that is designated by the department unless the person required to file the report applies for a waiver from electronic reporting by submitting a written request to the department.

36-2901.08. Hospital assessment

A. The director shall establish, administer and collect an assessment on hospital revenues, discharges or bed days for the purpose of funding the nonfederal share of the costs, except for costs of the services described in section 36-2907, subsection F, that are incurred beginning January 1, 2014 and that are not covered by the proposition 204 protection account established by section 36-778 and the Arizona tobacco litigation settlement fund established by section 36-2901.02 or any other monies appropriated to cover these costs, for all of the following individuals:

1. Persons who are defined as eligible pursuant to section 36-2901.07.
2. Persons who do not meet the eligibility standards described in the state plan or the section 1115 waiver that were in effect immediately before November 27, 2000, but who meet the eligibility standards described in the state plan as effective October 1, 2001.
3. Persons who are defined as eligible pursuant to section 36-2901.01 but who do not meet the eligibility standards in either section 36-2934 or the state plan in effect as of January 1, 2013.

B. The director shall adopt rules regarding the method for determining the assessment, the amount or rate of the assessment, and modifications or exemptions from the assessment. The assessment is subject to approval by the federal government to ensure that the assessment is not established or administered in a manner that causes a reduction in federal financial participation.

C. The director may establish modifications or exemptions to the assessment. In determining the modifications or exemptions, the director may consider factors including the size of the hospital, the specialty services available to patients and the geographic location of the hospital.

D. Before implementing the assessment, and thereafter if the methodology is modified, the director shall present the methodology to the joint legislative budget committee for review.

E. The administration shall not collect an assessment for costs associated with service after the effective date of any reduction of the federal medical assistance percentage established by 42 United States Code section 1396d(y) or 1396d(z) that is applicable to this state to less than eighty per cent.

F. The administration shall deposit the revenues collected pursuant to this section in the hospital assessment fund established by section 36-2901.09.

G. A hospital shall not pass the cost of the assessment on to patients or third-party payors that are liable to pay for care on a patient's behalf. As part of its financial statement submissions pursuant to section 36-125.04, a hospital shall submit to the department of health services an attestation that it has not passed on the cost of the assessment to patients or third-party payors.

H. If a hospital does not comply with this section as prescribed by the director, the director may suspend or revoke the hospital's Arizona health care cost containment system provider agreement registration. If the hospital does not comply within one hundred eighty days after the director suspends or revokes the hospital's provider agreement, the director shall notify the director of the department of health services, who shall suspend or revoke the hospital's license pursuant to section 36-427.

41-1073. Time frames; exception

A. No later than December 31, 1998, an agency that issues licenses shall have in place final rules establishing an overall time frame during which the agency will either grant or deny each type of license that it issues. Agencies shall submit their overall time frame rules to the governor's regulatory review council pursuant to the schedule developed by the council. The council shall schedule each agency's rules so that final overall time frame rules are in place no later than December 31, 1998. The rule regarding the overall time frame for each type of license shall state separately the administrative completeness review time frame and the substantive review time frame.

B. If a statutory licensing time frame already exists for an agency but the statutory time frame does not specify separate time frames for the administrative completeness review and the substantive review, by rule the agency shall establish separate time frames for the administrative completeness review and the substantive review, which together shall not exceed the statutory overall time frame. An agency may establish different time frames for initial licenses, renewal licenses and revisions to existing licenses.

C. The submission by the department of environmental quality of a revised permit to the United States environmental protection agency in response to an objection by that agency shall be given the same effect as a notice granting or denying a permit application for licensing time frame purposes. For the purposes of this subsection, "permit" means a permit required by title 49, chapter 2, article 3.1 or section 49-426.

D. In establishing time frames, agencies shall consider all of the following:

1. The complexity of the licensing subject matter.
2. The resources of the agency granting or denying the license.
3. The economic impact of delay on the regulated community.
4. The impact of the licensing decision on public health and safety.
5. The possible use of volunteers with expertise in the subject matter area.
6. The possible increased use of general licenses for similar types of licensed businesses or facilities.
7. The possible increased cooperation between the agency and the regulated community.
8. Increased agency flexibility in structuring the licensing process and personnel.

E. This article does not apply to licenses issued either:

1. Pursuant to tribal state gaming compacts.
2. Within seven days after receipt of initial application.
3. By a lottery method.

41-1074. Compliance with administrative completeness review time frame

- A. An agency shall issue a written notice of administrative completeness or deficiencies to an applicant for a license within the administrative completeness review time frame.
- B. If an agency determines that an application for a license is not administratively complete, the agency shall include a comprehensive list of the specific deficiencies in the written notice provided pursuant to subsection A. If the agency issues a written notice of deficiencies within the administrative completeness time frame, the administrative completeness review time frame and the overall time frame are suspended from the date the notice is issued until the date that the agency receives the missing information from the applicant.
- C. If an agency does not issue a written notice of administrative completeness or deficiencies within the administrative completeness review time frame, the application is deemed administratively complete. If an agency issues a timely written notice of deficiencies, an application shall not be complete until all requested information has been received by the agency.

41-1075. Compliance with substantive review time frame

- A. During the substantive review time frame, an agency may make one comprehensive written request for additional information. The agency and applicant may mutually agree in writing to allow the agency to submit supplemental requests for additional information. If an agency issues a comprehensive written request or a supplemental request by mutual written agreement for additional information, the substantive review time frame and the overall time frame are suspended from the date the request is issued until the date that the agency receives the additional information from the applicant.
- B. By mutual written agreement, an agency and an applicant for a license may extend the substantive review time frame and the overall time frame. An extension of the substantive review time frame and the overall time frame may not exceed twenty-five per cent of the overall time frame.

41-1076. Compliance with overall time frame

Unless an agency and an applicant for a license mutually agree to extend the substantive review time frame and the overall time frame pursuant to section 41-1075, an agency shall issue a written notice granting or denying a license within the overall time frame to an applicant. If an agency denies an application for a license, the agency shall include in the written notice at least the following information:

1. Justification for the denial with references to the statutes or rules on which the denial is based.
2. An explanation of the applicant's right to appeal the denial. The explanation shall include the number of days in which the applicant must file a protest challenging the denial and the name and telephone number of an agency contact person who can answer questions regarding the appeals process.

41-1079. Information required to be provided

- A. An agency that issues licenses shall provide the following information to an applicant at the time the applicant obtains an application for a license:
1. A list of all of the steps the applicant is required to take in order to obtain the license.
 2. The applicable licensing time frames.
 3. The name and telephone number of an agency contact person who can answer questions or provide assistance throughout the application process.
- B. This section does not apply to the Arizona peace officer standards and training board established by section 41-1821.

DEPARTMENT OF HEALTH SERVICES

Title 9, Chapter 10, Article 3, Behavioral Health Inpatient Facilities

GOVERNOR'S REGULATORY REVIEW COUNCIL

STAFF MEMORANDUM - FIVE-YEAR REVIEW REPORT

MEETING DATE: July 10, 2018

AGENDA ITEM: F-7

TO: Members of the Governor's Regulatory Review Council (Council)

FROM: Council Staff

DATE: June 19, 2018

SUBJECT: DEPARTMENT OF HEALTH SERVICES (F-18-0707)
Title 9, Chapter 10, Article 3, Behavioral Health Inpatient Facilities

COMMENTS ON THE FIVE-YEAR REVIEW REPORT

Purpose of the Agency and Number of Rules in the Report:

This five-year-review report from the Arizona Department of Health Services (Department) covers 24 rules in A.A.C. Title 9, Chapter 10, Article 3 related to licensing of behavioral health inpatient facilities. The rules establish application requirements; quality management reports; personnel requirements; admission procedure; treatment plan; discharge plan; patient rights; medical records retention; behavioral health services; child and adolescent residential treatment services; detoxification services; medication services; food services; emergency and safety standards; environmental standards; and physical plant standards.

The rules were last amended in 2014. This is the first five-year-review report on the rules.

Proposed Action

The Department plans to address the issues identified in this memo by submitting a Notice of Final Rulemaking to the Council by July 2019.

1. Has the agency analyzed whether the rules are authorized by statute?

Yes. The Department cites to A.R.S. §§ 36-132(A)(1), 36-132(A)(17) and 36-136(G) as general authority for the rules. A.R.S. § 36-132(A)(17) requires the Department to "license and regulate health care institutions" and under A.R.S. § 36-136(G), the Department "may make and amend rules necessary for the proper administration and enforcement of the laws relating to the public health." The Department also provides specific statutory authority for the rules in the report.

2. Summary of the agency’s economic impact comparison and identification of stakeholders:

There were 44 licensed behavioral health inpatient facilities in Arizona as of January 1, 2018. The Department received 36 renewal applications and 17 initial applications in 2017 for behavioral health inpatient facility licenses. In 2017, the Department also conducted 28 compliant surveys and 16 compliance surveys. The Department received \$7,250 in monetary penalties as a result of seven late applications and five survey enforcements. Six behavioral health inpatient facilities closed in 2017.

Stakeholders include the Department, Arizona behavioral health inpatient facilities, health care providers (including behavioral health professionals), social workers, patients, their families, and the general public.

The Department indicates that the rules were intended to reduce monetary regulatory costs and to facilitate licensing of “integrated health programs that provide both behavioral and physical health services.” The Department also states that changes made to the rules in the last five year period were intended to make the rules more consistent with current practices and to increase consistency within the health care institution licensing rules.

3. Has the agency analyzed the costs and benefits of the rulemaking and determined that the rules impose the least burden and costs to those who are regulated?

Yes. The Department believes that the rules impose the least burden and costs to persons regulated by the rules, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objectives.

4. Has the agency received any written criticisms of the rules over the last five years?

No. The Department indicates that it has not received any written criticisms of the rules over the last five years.

5. Has the agency analyzed the rules’ clarity, conciseness, and understandability, consistency with other rules and statutes, and effectiveness?

Yes. The Department indicates that the rules are consistent with other rules and statutes. Additionally, the Department notes that the rules are effective in achieving their objectives, with the following exceptions:

- Section 302: The term “initial license” should be removed from the rule to comply with statutory changes.
- Section 306: The rule should be amended to provide more specificity regarding requirements for staffing levels. Also, the rule should require a behavioral health professional to be on the premises at all times.

- Section 307: The rule should be modified to require a facility to assess the acuity of a patient upon admission and update a patient’s treatment plan accordingly. Subsection (8) allows a medical practitioners to wait up to 72 hours after the patient is admitted before performing a medical examination; however, based on incidents that have occurred the Department believes that the time period should be shorter to protect the patient’s health and safety.
- Section 314: The rule only allows medical services to be provided under the direction of a physician; however, the rule would be more effective if it better addressed to the physical needs of a patient. In addition, the contents in subsection (A)(2) should be moved to a new section titled “Nursing Services.” The rule should also require that an acuity plan be developed for each unit of the facility.
- Section 321: The rule references outdated guidelines. The reference should be changed to “Dietary Guidelines for Americans 2015-2020” and provide the correct document title and website address.

The Department has identified the following two rules that could be made more clear, concise, and understandable:

- Section 316: The rule should be amended to clarify that equipment and supplies are only required to be removed before use as a seclusion room.
- Section 324: In subsection (B)(8)(b), “patient” should be made plural to acknowledge that more than one patient might share a bedroom and bathroom.

6. Has the agency analyzed the current enforcement status of the rules?

No. The Department indicates that the rules are enforced as written.

7. Are the rules more stringent than corresponding federal law and, if so, is there statutory authority to exceed the requirements of federal law?

No. The Department indicates that no federal laws are applicable to the rules.

8. For rules adopted after July 29, 2010, do the rules require a permit or license and, if so, does the agency comply with A.R.S. § 41-1037?

Yes. The rules require the issuance of a specific agency authorization, which is authorized by A.R.S. § 36-405. The statute requires the director to “adopt licensing provisions that facilitate the colocation and integration of outpatient treatment centers that provide medical, nursing and health-related services....”

9. Conclusion

The Department plans to make the changes identified in this memo and submit a Notice of Final Rulemaking to the Council by July 2019. The report meets the requirements of A.R.S. § 41-1056 and R1-6-301. Council staff recommends approval of this report.



ARIZONA DEPARTMENT OF HEALTH SERVICES

POLICY & INTERGOVERNMENTAL AFFAIRS

May 17, 2018

Nicole O. Colyer, Esq., Chair
Governor's Regulatory Review Council
Arizona Department of Administration
100 N. 15th Avenue, Suite 305
Phoenix, AZ 85007

RE: Report for A.A.C. Title 9, Chapter 10, Article 3 Behavioral Health Inpatient Facilities

Dear Ms. Colyer:

According to the five-year-review report schedule of the Governor's Regulatory Review Council (Council), a report for A.A.C. Title 9, Chapter 10, Article 3 is due to the Council no later than May 31, 2018. The Arizona Department of Health Services (Department) has reviewed 9 A.A.C. 10, Article 3 and is enclosing a report to the Council for this rule.

The Department believes that this report complies with the requirements of A.R.S. § 41-1056. The attached PDF document includes the report along with the rules reviewed and the general and specific authority for the rules. As described in the report, the Department plans to amend the rules in 9 A.A.C. 10, Article 3 by July 2019.

The Department certifies that it is in compliance with A.R.S. § 41-1091.

If you need any further information, please contact me at (602) 542-5121.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robert Lane', written over a white rectangular area.

Robert Lane
Director's Designee

RL:rms
Enclosures

Douglas A. Ducey | Governor Cara M. Christ, MD, MS | Director

Arizona Department of Health Services
Five-Year-Review Report
Title 9. Health Services
Chapter 10. Department of Health Services
Health Care Institutions: Licensing
Article 3. Behavioral Health Inpatient
Facilities May 2018

1. Authorization of the rule by existing statutes

General Statutory Authority: A.R.S. §§ 36-132(A)(1), 36-132(A)(17), and 36-136(G)

Specific Statutory Authority: A.R.S. § 36-405, A.R.S. § 36-421, A.R.S. § 36-502(A) and (B)

2. The objective of each rule:

Rule	Objective
R9-10-301	The objective of the rule is to define terms used in the Article so requirements are clear and terms are interpreted consistently.
R9-10-302	The objective of the rule is to specify license application requirements specific to behavioral health inpatient facilities (in addition to the requirements in A.R.S. § 36-422 and 9 A.A.C. 10, Article 1).
R9-10-303	The objective of the rule is to establish minimum requirements and responsibilities of a behavioral health inpatient facility's governing authority and administrator.
R9-10-304	The objective of the rule is to establish minimum requirements for a behavioral health inpatient facility's quality management program.
R9-10-305	The objective of the rule is to establish minimum requirements for a person who contracts with the licensee to provide behavioral health inpatient facility services.
R9-10-306	The objective of the rule is to establish minimum standards for behavioral health inpatient facility personnel and minimum standards for documentation of personnel member qualifications.
R9-10-307	The objective of the rule is to establish minimum requirements for admission and assessment.
R9-10-308	The objective of the rule is to establish minimum requirements for developing and implementing a treatment plan for a patient.
R9-10-309	The objective of the rule is to establish minimum requirements for discharge and discharge planning.
R9-10-310	The objective of the rule is to establish minimum requirements for transport and transfer to ensure that a patient's health and safety are not compromised as a result of a transport

	or transfer.
R9-10-311	The objective of the rule is to establish minimum standards for patient rights.
R9-10-312	The objective of the rule is to establish minimum requirements for patient medical records.
R9-10-313	The objective of the rule is to establish minimum requirements for transportation and patient outings.
R9-10-314	The objective of the rule is to establish minimum requirements for physical health services provided by a behavioral health inpatient facility.
R9-10-315	The objective of the rule is to establish minimum requirements for behavioral health services provided by a behavioral health inpatient facility.
R9-10-316	The objective of the rule is to establish minimum requirements for using restraint or seclusion in a behavioral health inpatient facility.
R9-10-317	The objective of the rule is to establish minimum requirements for a behavioral health inpatient facility that provides behavioral health observation/stabilization services.
R9-10-318	The objective of the rule is to establish minimum requirements for a behavioral health inpatient facility that provides child and adolescent residential treatment services.
R9-10-319	The objective of the rule is to establish minimum requirements for a behavioral health inpatient facility that provides detoxification services.
R9-10-320	The objective of the rule is to establish minimum requirements for medication services.
R9-10-321	The objective of the rule is to establish minimum requirements for food services provided at a behavioral health inpatient facility.
R9-10-322	The objective of the rule is to establish minimum emergency and safety standards.
R9-10-323	The objective of the rule is to establish minimum environmental standards.
R9-10-324	The objective of the rule is to establish minimum physical plant standards.

3. **Are the rules effective in achieving their objectives?** Yes No

If not, please identify the rule(s) that is not effective and provide an explanation for why the rule(s) is not effective.

Rule	Explanation
R9-10-302	The rule is effective, but would be more effective if the Department removed the term “initial license” to reflect the changes made by Laws 2017, ch 122.
R9-10-306	The rule is effective, but it would be more effective if the Department added more specific requirements for staffing levels and the rule required a behavioral health professional to be on the premises.
R9-10-307	The rule is effective. However, the following would improve the rule’s effectiveness:

	<ul style="list-style-type: none"> The rule would be more effective if it required a facility to assess the acuity of a patient upon admission and update a patient’s treatment plan in response to additional information about or changes to the patient’s acuity. R9-10-307(8) permits a medical practitioner to wait up to 72 hours after admission before performing a medical history and physical examination. Based on incidents that have occurred in this class of health care institution, the Department believes the permissible time period should be shorter to protect the health and safety of a patient. The rule would be more effective if the Department added a requirement that a treatment plan must address the staffing necessary to meet the patient’s level of acuity.
R9-10-314	<p>The rule is effective. However, the following would improve the rule’s effectiveness:</p> <ul style="list-style-type: none"> The current rule allows medical services to be provided only under the direction of a physician. The rule would be more effective if it better addressed to physical needs of the patient to ensure health and safety. The rule would be more effective if the contents of R9-10-314(A)(2) were expanded upon within the section or moved to a new Section entitled “Nursing Services.” The rule would be more effective if it required that an acuity plan be developed for each unit of the facility and reflect the assessed acuity of each patient in the unit.
R9-10-321	<p>The rule is effective. However, R9-10-321(B)(3) references outdated guidelines at https://health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf. The rule would be more effective if it referenced the up-to-date “Dietary Guidelines for Americans 2015-2020” and used the document name in addition to the link to increase clarity if the website location changes.</p>

4. **Are the rules consistent with other rules and statutes?** Yes No

If not, please identify the rule(s) that is not consistent. Also, provide an explanation and identify the provisions that are not consistent with the rule.

Rule	Explanation

5. **Are the rules enforced as written?** Yes No

If not, please identify the rule(s) that is not enforced as written and provide an explanation of the issues with enforcement. In addition, include the agency’s proposal for resolving the issue.

Rule	Explanation

6. **Are the rules clear, concise, and understandable?** Yes No

If not, please identify the rule(s) that is not clear, concise, or understandable and provide an explanation as to how the agency plans to amend the rule(s) to improve clarity, conciseness, and understandability.

Rule	Explanation
R9-10-316	The rule is clear, concise and understandable, although the wording in R9-10-316(B)(4)(d) would be clearer if it clarified that equipment and supplies are only required to be removed before use as a seclusion room.
R9-10-324	The rule is clear, concise and understandable, although the rule would be clearer if “patient” were changed to “patient or patients” in R9-10-324(B)(8)(b) to acknowledge that more than one patient might share a bedroom and therefore also share a bathroom.

7. **Has the agency received written criticisms of the rules within the last five years?** Yes No

If yes, please fill out the table below:

Commenter	Comment	Agency’s Response

8. **Economic, small business, and consumer impact comparison:**

There were 44 licensed behavioral health inpatient facilities in Arizona as of January 1, 2018. The Department received 36 renewal applications and 17 initial applications in 2017. In 2017, the Department also conducted twenty-eight complaint surveys and sixteen compliance surveys and received \$7250.00 in monetary penalties as a result of seven late applications and five survey enforcements. Six behavioral health inpatient facilities closed in 2017.

Prior to 2013, the rules for facilities now located under behavioral health inpatient facility licensure had been adopted at 9 A.A.C. 20. In 2013, the rules for level 1 residential treatment centers and level 1 sub-acute agencies from 9 A.A.C. 20 were revised in their entirety, integrated with other health care institution licensure rules, and moved to 9 A.A.C. 10, Article 3 as part of an exempt rulemaking to comply with Laws 2011, Ch. 96. Laws 2013, Ch. 10, § 13, amended Laws 2011, Ch. 96 to extend the time for the Department to further revise the rules in 9 A.A.C. 10 under exempt rulemaking authority to April 30, 2014, during which time another exempt rulemaking of 9 A.A.C. 10 and 9 A.A.C. 20 (effective July 1, 2014) further revised all but three of the rules and added a new Section.

Stakeholders for these rulemakings include the Department, Arizona behavioral health inpatient facilities, health care providers (including behavioral health professionals), social workers, patients and their families, and

the general public.

The changes in both the 2013 exempt rulemaking and the 2014 exempt rulemaking were intended to reduce monetary and regulatory costs and facilitate licensing of “integrated health programs that provide both behavioral and physical health services.” The changes also made the rules more consistent with practices and increased consistency within health care institution licensing rules.

The 2013 exempt rulemaking moved some of the information related to behavioral health inpatient facilities from the old 9 A.A.C. 20 to 9 A.A.C. 10, Article 1, which contains requirements that apply to all health care institutions. It also created 9 A.A.C. 10, Article 3, which is specific to behavioral health inpatient facilities.

The 2013 exempt rulemaking changed some requirements for behavioral health inpatient facilities when it created 9 A.A.C. 10, Article 3. It added more specific requirements for governing authorities and administrators, added requirements for quality management, and added contracted services requirements. It also made minor changes to personnel requirements, including additional requirements related to personnel qualifications. The Department separated requirements for assessment and treatment plan into separate Sections, combined admission and assessment into one Section, and added Sections for “Transport; Transfer,” “Medical Records,” “Physical Health Services,” “Behavioral Health Services,” “Behavioral Health Observation/Stabilization Services,” “Food Services,” “Emergency and Safety Standards,” and “Physical Plant Standards.” It also combined the old “Transportation” Section and the old “Outings” Section into one “Patient Outings” Section and removed a few transportation and outing requirements. The rulemaking also altered admission and assessment requirements and made minor changes to required time frames for updating patient medical records. The rulemaking added several requirements for discharge, although it removed requirements for involuntary discharge. It also rearranged the patient rights Section by moving several components that had been part of patient rights to other Sections, adding a few additional requirements, and removing a few items. Significant changes were made to the restraint and seclusion Section and several definitions were removed. The rulemaking also removed a few requirements about detoxification. The “Environmental Standards” Section was significantly rearranged and altered and some items were moved to the new “Physical Plant Standards” Section, although several new items were also added to the “Physical Plant Standards” Section. These changes integrated the licensing of health programs that provide both behavioral and physical health services and made the rules more effective and easier to understand.

The 2014 exempt rulemaking made changes to most Sections and added a Section for “Child and Adolescent Residential Treatment Services” to consolidate requirements related to patients under age eighteen that had been in other Sections. It also changed the requirements for when an applicant must indicate what they are requesting authorization to provide. The rulemaking added items that must be included in policies and procedures and clarified when an individual who is accountable when an administrator is not present must be present on the premises. It also added a personnel record requirement, removed fingerprint clearance requirements, and removed requirements related to patient transport. It made a minor change related to discharge

and altered assessment requirements, including the timeline and personnel involved. The rulemaking specified exceptions to transport and transfer requirements and clarified that consent is required before release of information in patient medical records. It also added a number of items that must be included in patient medical records. It made a few changes to requirements for physical health services. It removed several requirements for restraint and seclusion and added requirements for facilities authorized to provide seclusion. It made a few small changes to the detoxification Section and updated meal planning guidelines to Dietary Guidelines for Americans, 2010. Pet vaccination requirements were simplified and minor changes were made to the tobacco policy and emergency and safety standards. The rulemaking also changed facility requirements for bedrooms and added an allowance for an administrator to ask for more time to comply with physical plant standards. These changes integrated the licensing of health programs that provide both behavioral and physical health services and made the rules more effective and easier to understand.

9. **Has the agency received any business competitiveness analyses of the rules?** Yes ___ No √

10. **Has the agency completed the course of action indicated in the agency's previous five-year-review report?**
Please state what the previous course of action was and if the agency did not complete the action, please explain why not.

This is the first five-year-review of the new rules adopted by exempt rulemaking in 2013 and amended in 2014.

11. **A determination that the probable benefits of the rule outweigh within this state the probable costs of the rule, and the rule imposes the least burden and costs to regulated persons by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective:**

The changes in both the 2013 exempt rulemaking and the 2014 exempt rulemaking were intended to reduce monetary and regulatory costs and the Department believes that the rule imposes the least burden and costs to persons regulated by the rule, including paperwork and other compliance costs, necessary to achieve the underlying regulatory objective.

12. **Are the rules more stringent than corresponding federal laws?** Yes ___ No √

Please provide a citation for the federal law(s). And if the rule(s) is more stringent, is there statutory authority to exceed the requirements of federal law(s)?

Federal laws are not applicable to the rules in 9 A.A.C. 10, Article 3.

13. **For rules adopted after July 29, 2010 that require the issuance of a regulatory permit, license, or agency authorization, whether the rules are in compliance with the general permit requirements of A.R.S. § 41-1037 or explain why the agency believes an exception applies:**

The rules require the issuance of a specific agency authorization, which is authorized by A.R.S. § 36-405, so a general permit is not applicable.

14. **Proposed course of action**

If possible, please identify a month and year by which the agency plans to complete the course of action.

The Department plans to amend the rules in 9 A.A.C. 10, Article 3 to address issues identified in this 5 year review by July 2019.

TITLE 9. HEALTH SERVICES

CHAPTER 10. DEPARTMENT OF HEALTH SERVICES - HEALTH CARE INSTITUTIONS: LICENSING

Editor's Note: The heading for 9 A.A.C. 10 changed from "Licensure" to "Licensing" per a request from the Department of Health Services (Supp. 03-4).

Editor's Note: The Office of the Secretary of State publishes all Chapters on white paper (Supp. 01-2).

Editor's Note: This Chapter contains rules which were adopted, amended, and repealed under exemptions from the provisions of the Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1993, Ch. 163, § 3(B); Laws 1996, Ch. 329, § 5; Laws 1998, Ch. 178 § 17, and Laws 1999, Ch. 311. Exemption from A.R.S. Title 41, Chapter 6 means that the Department of Health Services did not submit these rules to the Governor's Regulatory Review Council for review; the Department may not have submitted notice of proposed rulemaking to the Secretary of State for publication in the Arizona Administrative Register; the Department was not required to hold public hearings on these rules; and the Attorney General did not certify these rules. Because this Chapter contains rules which are exempt from the regular rulemaking process, the Chapter is printed on blue paper.

ARTICLE 3. BEHAVIORAL HEALTH INPATIENT FACILITIES

Article 3, consisting of Sections R9-10-311 through R9-10-333, repealed at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

Article 3, consisting of Sections R9-10-301 through R9-10-333, adopted effective February 4, 1981.

Former Article 3, consisting of Sections R9-10-301 through R9-10-335, repealed effective February 4, 1981.

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ARTICLE 3. BEHAVIORAL HEALTH INPATIENT FACILITIES

Article 3, consisting of Sections R9-10-311 through R9-10-333, repealed at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-301. Definitions

In addition to the definitions in A.R.S. § 36-401 and R9-10-101, the following applies in this Article unless otherwise specified:

“Child and adolescent residential treatment services” means behavioral health services and physical health services provided in or by a behavioral health inpatient facility to a patient who is:

- Under 18 years of age, or
- Under 21 years of age and meets the criteria in R9-10-318(B).

Historical Note

New Section R9-10-301 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-302. Supplemental Application Requirements

In addition to the license application requirements in A.R.S. § 36-422 and R9-10-105, an applicant for an initial license as a behavioral health inpatient facility shall include in a Department-provided format whether the applicant is requesting authorization to provide:

1. Inpatient services to individuals 18 years of age and older, including the licensed capacity requested;
2. Court-ordered pre-petition screening;
3. Court-ordered evaluation;
4. Court-ordered treatment;
5. Behavioral health observation/stabilization services, including the licensed occupancy requested for providing behavioral health observation/stabilization services to individuals:
 - a. Under 18 years of age, and
 - b. 18 years of age and older;
6. Child and adolescent residential treatment services, including the licensed capacity requested;
7. Detoxification services;
8. Seclusion;
9. Clinical laboratory services;
10. Radiology services; or
11. Diagnostic imaging services.

Historical Note

New Section R9-10-302 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-303. Administration

A. A governing authority shall:

1. Consist of one or more individuals responsible for the organization, operation, and administration of a behavioral health inpatient facility;
2. Establish, in writing:
 - a. A behavioral health inpatient facility’s scope of services, and
 - b. Qualifications for an administrator;
3. Designate, in writing, an administrator who has the qualifications established in subsection (A)(2)(b);
4. Adopt a quality management program according to R9-10-304;
5. Review and evaluate the effectiveness of the quality management program at least once every 12 months;
6. Designate, in writing, an acting administrator who has the qualifications established in subsection (A)(2)(b), if the administrator is:
 - a. Expected not to be present on the behavioral health inpatient facility’s premises for more than 30 calendar days, or
 - b. Not present on the behavioral health inpatient facility’s premises for more than 30 calendar days; and
7. Except as provided in subsection (A)(6), notify the Department according to A.R.S. § 36-425(I) when there is a change in the administrator and identify the name and qualifications of the new administrator.

B. An administrator:

1. Is directly accountable to the governing authority of a behavioral health inpatient facility for the daily operation of the behavioral health inpatient facility and for all services provided by or at the behavioral health inpatient facility;

2. Has the authority and responsibility to manage the behavioral health inpatient facility; and
 3. Except as provided in subsection (A)(6), designates, in writing, an individual who is present on the behavioral health inpatient facility's premises and accountable for the behavioral health inpatient facility when the administrator is not present on the behavioral health inpatient facility's premises.
- C. An administrator shall ensure that:
1. Policies and procedures are established, documented, and implemented to protect the health and safety of a patient that:
 - a. Cover job descriptions, duties, and qualifications, including required skills, knowledge, education, and experience for personnel members, employees, volunteers, and students;
 - b. Cover orientation and in-service education for personnel members, employees, volunteers, and students;
 - c. Include how a personnel member may submit a complaint relating to services provided to a patient;
 - d. Cover the requirements in A.R.S. Title 36, Chapter 4, Article 11;
 - e. Cover cardiopulmonary resuscitation training including:
 - i. The method and content of cardiopulmonary resuscitation training,
 - ii. The qualifications for an individual to provide cardiopulmonary resuscitation training,
 - iii. The time-frame for renewal of cardiopulmonary resuscitation training, and
 - iv. The documentation that verifies that the individual has received cardiopulmonary resuscitation training;
 - f. Cover first aid training;
 - g. Include a method to identify a patient to ensure the patient receives physical health and behavioral health services as ordered;
 - h. Cover patient rights, including assisting a patient who does not speak English or who has a physical or other disability to become aware of patient rights;
 - i. Cover specific steps for:
 - i. A patient to file a complaint, and
 - ii. The behavioral health inpatient facility to respond to a patient's complaint;
 - j. Cover health care directives;
 - k. Cover medical records, including electronic medical records;
 - l. Cover quality management, including incident reports and supporting documentation;
 - m. Cover contracted services; and
 - n. Cover when an individual may visit a patient in the behavioral health inpatient facility;
 2. Policies and procedures for behavioral health services and physical health services are established, documented, and implemented to protect the health and safety of a patient that:
 - a. Cover patient screening, admission, assessment, treatment plan, transport, transfer, discharge planning, and discharge;
 - b. Cover the provision of behavioral health services and physical health services;
 - c. Include when general consent and informed consent are required;
 - d. Cover restraint and, if applicable, seclusion;
 - e. Cover dispensing, administering, and disposing of medication, including provisions for inventory control and preventing diversion of controlled substances;
 - f. Cover prescribing a controlled substance to minimize substance abuse by a patient;
 - g. Cover infection control;
 - h. Cover telemedicine, if applicable;
 - i. Cover environmental services that affect patient care;
 - j. Cover patient outings;
 - k. Cover whether pets and animals are allowed on the premises, including procedures to ensure that any pets or animals allowed on the premises do not endanger the health or safety of patients or the public;
 - l. If the behavioral health inpatient facility is involved in research, cover the establishment or use of a Human Subject Review Committee;
 - m. Cover the process for receiving a fee from a patient and refunding a fee to a patient;
 - n. Cover the process for obtaining patient preferences for social, recreational, or rehabilitative activities and meals and snacks;
 - o. Cover the security of a patient's possessions that are allowed on the premises; and
 - p. Cover smoking and the use of tobacco products on the premises;
 3. Policies and procedures are reviewed at least once every three years and updated as needed;
 4. Policies and procedures are available to personnel members, employees, volunteers and students; and
 5. Unless otherwise stated:
 - a. Documentation required by this Article is provided to the Department within two hours after a Department request; and

- b. When documentation or information is required by this Chapter to be submitted on behalf of a behavioral health inpatient facility, the documentation or information is provided to the unit in the Department that is responsible for licensing and monitoring the behavioral health inpatient facility.
- D.** An administrator shall designate a:
 1. Medical director who:
 - a. Provides direction for physical health services provided by or at the behavioral health inpatient facility;
 - b. Is a physician or registered nurse practitioner; and
 - c. May be the same individual as the administrator, if the individual meets the qualifications in subsections (A)(2)(b) and (D)(1)(a) and (b);
 2. Clinical director who:
 - a. Provides direction for the behavioral health services provided by or at the behavioral health inpatient facility;
 - b. Is a behavioral health professional; and
 - c. May be the same individual as the administrator, if the individual meets the qualifications in subsections (A)(2)(b) and (D)(2)(a) and (b); and
 3. Registered nurse to provide direction for nursing services provided by or at the behavioral health inpatient facility.
- E.** An administrator shall provide written notification to the Department of a patient's:
 1. Death, if the patient's death is required to be reported according to A.R.S. § 11-593, within one working day after the patient's death; and
 2. Self-injury, within two working days after the patient inflicts a self-injury that requires immediate intervention by an emergency medical services provider.
- F.** Except as specified in R9-10-318(A)(1), if abuse, neglect, or exploitation of a patient is alleged or suspected to have occurred before the patient was admitted or while the patient is not on the premises and not receiving services from a behavioral health inpatient facility's employee or personnel member, an administrator shall report the alleged or suspected abuse, neglect, or exploitation of the patient according to A.R.S. § 46-454.
- G.** If an administrator has a reasonable basis, according to A.R.S. § 46-454, to believe abuse, neglect, or exploitation has occurred on the premises or while a patient is receiving services from a behavioral health inpatient facility's employee or personnel member, the administrator shall:
 1. If applicable, take immediate action to stop the suspected abuse, neglect, or exploitation;
 2. Report the suspected abuse, neglect, or exploitation of the patient according to A.R.S. § 46-454;
 3. Document:
 - a. The suspected abuse, neglect, or exploitation;
 - b. Any action taken according to subsection (G)(1); and
 - c. The report in subsection (G)(2);
 4. Maintain the documentation in subsection (G)(3) for at least 12 months after the date of the report in subsection (G)(2);
 5. Initiate an investigation of the suspected abuse, neglect, or exploitation and document the following information within five working days after the report required in subsection (G)(2):
 - a. The dates, times, and description of the suspected abuse, neglect, or exploitation;
 - b. A description of any injury to the patient related to the suspected abuse or neglect and any change to the patient's physical, cognitive, functional, or emotional condition;
 - c. The names of witnesses to the suspected abuse, neglect, or exploitation; and
 - d. The actions taken by the administrator to prevent the suspected abuse, neglect, or exploitation from occurring in the future; and
 6. Maintain a copy of the documented information required in subsection (G)(5) and any other information obtained during the investigation for at least 12 months after the date the investigation was initiated.
- H.** An administrator shall establish and document the criteria for determining when a patient's absence is unauthorized, including the criteria for a patient who:
 1. Was admitted under A.R.S. Title 36, Chapter 5, Articles 1, 2, or 3;
 2. Is absent against medical advice; or
 3. Is under the age of 18.
- I.** An administrator shall:
 1. For a patient who is under a court's jurisdiction, within an hour after determining that the patient's absence is unauthorized according to the criteria in subsection (H), notify the appropriate court or a person designated by the appropriate court;
 2. Document the notification in subsection (I)(1) and the written log required in subsection (I)(3);
 3. Maintain a written log of unauthorized absences for at least 12 months after the date of a patient's absence that includes the:
 - a. Name of a patient absent without authorization;
 - b. If applicable, name of the person notified as required in subsection (I)(1); and

- c. Date of the notification; and
4. Evaluate and take action related to unauthorized absences under the quality management program in R9-10-304.

Historical Note

New Section R9-10-303 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-304. Quality Management

An administrator shall ensure that:

1. A plan is established, documented, and implemented for an ongoing quality management program that, at a minimum, includes:
 - a. A method to identify, document, and evaluate incidents;
 - b. A method to collect data to evaluate services provided to patients;
 - c. A method to evaluate the data collected to identify a concern about the delivery of services related to patient care;
 - d. A method to make changes or take action as a result of the identification of a concern about the delivery of services related to patient care; and
 - e. The frequency of submitting a documented report required in subsection (2) to the governing authority;
2. A documented report is submitted to the governing authority that includes:
 - a. An identification of each concern about the delivery of services related to patient care, and
 - b. Any changes made or actions taken as a result of the identification of a concern about the delivery of services related to patient care; and
3. The report required in subsection (2) and the supporting documentation for the report are maintained for at least 12 months after the date the report is submitted to the governing authority.

Historical Note

New Section R9-10-304 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-305. Contracted Services

An administrator shall ensure that:

1. Contracted services are provided according to the requirements in this Article, and
2. Documentation of current contracted services is maintained that includes a description of the contracted services provided.

Historical Note

New Section R9-10-305 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-306. Personnel

A. An administrator shall ensure that:

1. A personnel member is:
 - a. At least 21 years old, or
 - b. At least 18 years old and is licensed or certified under A.R.S. Title 32 and providing services within the personnel member's scope of practice;
2. An employee is at least 18 years old;
3. A student is at least 18 years old; and
4. A volunteer is at least 21 years old.

B. An administrator shall ensure that:

1. The qualifications, skills, and knowledge required for each type of personnel member:
 - a. Are based on:
 - i. The type of physical health services or behavioral health services expected to be provided by the personnel member according to the established job description, and
 - ii. The acuity of the patients receiving physical health services or behavioral health services from the personnel member according to the established job description; and
 - b. Include:
 - i. The specific skills and knowledge necessary for the personnel member to provide the expected physical health services and behavioral health services listed in the established job description,

- ii. The type and duration of education that may allow the personnel member to have acquired the specific skills and knowledge for the personnel member to provide the expected physical health services or behavioral health services listed in the established job description, and
 - iii. The type and duration of experience that may allow the personnel member to have acquired the specific skills and knowledge for the personnel member to provide the expected physical health services or behavioral health services listed in the established job description;
 - 2. A personnel member's skills and knowledge are verified and documented:
 - a. Before the personnel member provides physical health services or behavioral health services, and
 - b. According to policies and procedures; and
 - 3. Sufficient personnel members are present on a behavioral health inpatient facility's premises with the qualifications, skills, and knowledge necessary to:
 - a. Provide the services in the behavioral health inpatient facility's scope of services,
 - b. Meet the needs of a patient, and
 - c. Ensure the health and safety of a patient.
- C.** An administrator shall comply with the requirements for behavioral health technicians and behavioral health paraprofessionals in R9-10-115.
- D.** An administrator shall ensure that an individual who is licensed under A.R.S. Title 32, Chapter 33 as a baccalaureate social worker, master social worker, associate marriage and family therapist, associate counselor, or associate substance abuse counselor is under direct supervision, as defined in A.A.C. R4-6-101.
- E.** An administrator shall ensure that a personnel member or an employee, volunteer, or student who has or is expected to have direct interaction with a patient, provides evidence of freedom from infectious tuberculosis:
- 1. On or before the date the individual begins providing services at or on behalf of the behavioral health inpatient facility, and
 - 2. As specified in R9-10-113.
- F.** An administrator shall ensure that a personnel record is maintained for each personnel member, employee, volunteer, or student that includes:
- 1. The individual's name, date of birth, and contact telephone number;
 - 2. The individual's starting date of employment or volunteer service and, if applicable, the ending date; and
 - 3. Documentation of:
 - a. The individual's qualifications, including skills and knowledge applicable to the employee's job duties;
 - b. The individual's education and experience applicable to the employee's job duties;
 - c. The individual's completed orientation and in-service education as required by policies and procedures;
 - d. The individual's license or certification, if the individual is required to be licensed or certified in this Article or policies and procedures;
 - e. The individual's qualifications and on-going training for each type of restraint or seclusion used, as required in R9-10-316;
 - f. If the individual is a behavioral health technician, clinical oversight required in R9-10-115;
 - g. Cardiopulmonary resuscitation training, if required for the individual according to R9-10-303(C)(1)(e);
 - h. First aid training, if required for the individual according to this Article or policies and procedures; and
 - i. Evidence of freedom from infectious tuberculosis, if required for the individual according to subsection (E).
- G.** An administrator shall ensure that personnel records are:
- 1. Maintained:
 - a. Throughout an individual's period of providing services in or for the behavioral health inpatient facility, and
 - b. For at least 24 months after the last date the individual provided services in or for the behavioral health inpatient facility; and
 - 2. For a personnel member who has not provided physical health services or behavioral health services at or for the behavioral health inpatient facility during the previous 12 months, provided to the Department within 72 hours after the Department's request.
- H.** An administrator shall ensure that:
- 1. A plan to provide orientation specific to the duties of a personnel member, an employee, a volunteer, and a student is developed, documented, and implemented;
 - 2. A personnel member completes orientation before providing behavioral health services or physical health services;
 - 3. An individual's orientation is documented, to include:
 - a. The individual's name,
 - b. The date of the orientation, and
 - c. The subject or topics covered in the orientation;
 - 4. A clinical director develops, documents, and implements a plan to provide in-service education specific to the duties of a personnel member; and

5. A personnel member's in-service education is documented, to include:
 - a. The personnel member's name,
 - b. The date of the training, and
 - c. The subject or topics covered in the training.
- I. An administrator shall ensure that a behavioral health inpatient facility has a daily staffing schedule that:
 1. Indicates the date, scheduled work hours, and name of each employee assigned to work, including on-call personnel members;
 2. Includes documentation of the employees who work each calendar day and the hours worked by each employee; and
 3. Is maintained for at least 12 months after the last date on the daily staffing schedule.
- J. An administrator shall ensure that:
 1. A physician or registered nurse practitioner is present on the behavioral health inpatient facility's premises or on-call,
 2. A registered nurse is present on the behavioral health inpatient facility's premises, and
 3. A registered nurse who provides direction for the nursing services provided at the behavioral health inpatient facility is present at the behavioral health inpatient facility at least 40 hours every week.

Historical Note

New Section R9-10-306 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-307. Admission; Assessment

Except as provided in R9-10-315(E) or (F), an administrator shall ensure that:

1. A patient is admitted based upon the patient's presenting behavioral health issue and treatment needs and the behavioral health inpatient facility's ability and authority to provide physical health services, behavioral health services, and ancillary services consistent with the patient's treatment needs;
2. A patient is admitted on the order of a medical practitioner or clinical director;
3. A medical practitioner or clinical director, authorized by policies and procedures to accept a patient for admission, is available;
4. Except in an emergency or as provided in subsections (6) and (7), general consent is obtained from a patient or, if applicable, the patient's representative before or at the time of admission;
5. The general consent obtained in subsection (4) or the lack of consent in an emergency is documented in the patient's medical record;
6. General consent is not required from a patient receiving a court-ordered evaluation or court-ordered treatment;
7. General consent is not required from a patient receiving treatment according to A.R.S. § 36-512;
8. A medical practitioner performs a medical history and physical examination on a patient within 30 calendar days before admission or within 72 hours after admission and documents the medical history and physical examination in the patient's medical record within 72 hours after admission;
9. If a medical practitioner performs a medical history and physical examination on a patient before admission, the medical practitioner enters an interval note into the patient's medical record within seven calendar days after admission;
10. Except when a patient needs crisis services, a behavioral health assessment of a patient is completed before treatment for the patient is initiated;
11. If a behavioral health assessment is conducted by a:
 - a. Behavioral health technician or registered nurse, within 24 hours a behavioral health professional, certified or licensed under A.R.S. Title 32 to provide the behavioral health services needed by the patient, reviews and signs the behavioral health assessment to ensure that the behavioral health assessment identifies the behavioral health services needed by the patient; or
 - b. Behavioral health paraprofessional, a behavioral health professional, certified or licensed under A.R.S. Title 32 to provide the behavioral health services needed by the patient, supervises the behavioral health paraprofessional during the completion of the behavioral health assessment and signs the behavioral health assessment to ensure that the behavioral health assessment identifies the behavioral health services needed by the patient;
12. When a patient is admitted, a registered nurse:
 - a. Conducts a nursing assessment of a patient's medical condition and history;
 - b. Determines whether the:
 - i. Patient requires immediate physical health services, and
 - ii. Patient's behavioral health issue may be related to the patient's medical condition and history;
 - c. Documents the patient's nursing assessment and the determinations required in subsection (12)(b) in the patient's medical record; and

- d. Signs the patient's medical record;
- 13. A behavioral health assessment:
 - a. Documents the patient's:
 - i. Presenting issue;
 - ii. Substance abuse history;
 - iii. Co-occurring disorder;
 - iv. Legal history, including:
 - (1) Custody,
 - (2) Guardianship, and
 - (3) Pending litigation;
 - v. Court-ordered evaluation;
 - vi. Court-ordered treatment;
 - vii. Criminal justice record;
 - viii. Family history;
 - ix. Behavioral health treatment history;
 - x. Symptoms reported by the patient; and
 - xi. Referrals needed by the patient, if any; and
 - b. Includes:
 - i. Recommendations for further assessment or examination of the patient's needs;
 - ii. For a patient who:
 - (1) Is admitted to receive crisis services, the behavioral health services and physical health services that will be provided to the patient; or
 - (2) Does not need crisis services, the behavioral health services or physical health services that will be provided to the patient until the patient's treatment plan is completed; and
 - iii. The signature and date signed of the personnel member conducting the behavioral health assessment;
- 14. A patient is referred to a medical practitioner if a determination is made that the patient requires immediate physical health services or the patient's behavioral health issue may be related to the patient's medical condition;
- 15. A request for participation in a patient's behavioral health assessment is made to the patient or the patient's representative;
- 16. An opportunity for participation in the patient's behavioral health assessment is provided to the patient or the patient's representative;
- 17. The request in subsection (15) and the opportunity in subsection (16) are documented in the patient's medical record;
- 18. For a patient who is admitted to receive crisis services, the patient's behavioral health assessment is documented in the patient's medical record within 24 hours after admission;
- 19. Except as provided in subsection (18), a patient's behavioral health assessment is documented in the patient's medical record within 48 hours after completing the assessment; and
- 20. If the information listed in subsection (13) is obtained about a patient after the patient's behavioral health assessment is completed, an interval note, including the information, is documented in the patient's medical record within 48 hours after the information is obtained.

Historical Note

New Section R9-10-307 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-308. Treatment Plan

- A. Except for a patient admitted to receive crisis services or as provided in R9-10-315(E) or (F), an administrator shall ensure that a treatment plan is developed and implemented for a patient that is:
 - 1. Based on the behavioral health assessment and on-going changes to the behavioral health assessment of the patient;
 - 2. Completed:
 - a. By a behavioral health professional or by a behavioral health technician under the clinical oversight of a behavioral health professional, and
 - b. Before the patient receives treatment;
 - 3. Documented in the patient's medical record within 48 hours after the patient first receives treatment;
 - 4. Includes:
 - a. The patient's presenting issue;
 - b. The behavioral health services and physical health services to be provided to the patient;

- c. The signature of the patient or the patient's representative and date signed, or documentation of the refusal to sign;
- d. The date when the patient's treatment plan will be reviewed;
- e. If a discharge date has been determined, the treatment needed after discharge; and
- f. The signature of the personnel member who developed the treatment plan and the date signed;
- 5. If the treatment plan was completed by a behavioral health technician, reviewed and signed by a behavioral health professional within 24 hours after the completion of the treatment plan to ensure that the treatment plan meets the patient's treatment needs; and
- 6. Reviewed and updated on an on-going basis:
 - a. According to the review date specified in the treatment plan,
 - b. When a treatment goal is accomplished or changes,
 - c. When additional information that affects the patient's behavioral health assessment is identified, and
 - d. When a patient has a significant change in condition or experiences an event that affects treatment.
- B.** An administrator shall ensure that:
 - 1. A request for participation in developing a patient's treatment plan is made to the patient or the patient's representative;
 - 2. An opportunity for participation in developing the patient's treatment plan is provided to the patient or the patient's representative; and
 - 3. The request in subsection (B)(1) and the opportunity in subsection (B)(2) are documented in the patient's medical record.
- C.** If a patient who is admitted to receive crisis services remains admitted as a patient after the patient no longer needs crisis services, an administrator shall ensure that a treatment plan for the patient is:
 - 1. Except for subsection (A)(3), completed according to the requirements in subsection (A); and
 - 2. Documented in the patient's medical record within 24 hours after the patient no longer needs crisis services.

Historical Note

New Section R9-10-308 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-309. Discharge

- A.** Except as provided in R9-10-315(E) or (F), an administrator shall ensure that a discharge plan for a patient is:
 - 1. Developed that:
 - a. Identifies any specific needs of the patient after discharge;
 - b. If the discharge date has been determined, includes the discharge date;
 - c. Is completed before discharge occurs; and
 - d. Includes a description of the level of care that may meet the patient's assessed and anticipated needs after discharge;
 - 2. Documented in the patient's medical record within 48 hours after the discharge plan is completed; and
 - 3. Provided to the patient or the patient's representative before the discharge occurs.
- B.** An administrator shall ensure that:
 - 1. A request for participation in developing a patient's discharge plan is made to the patient or the patient's representative,
 - 2. An opportunity for participation in developing the patient's discharge plan is provided to the patient or the patient's representative, and
 - 3. The request in subsection (B)(1) and the opportunity in subsection (B)(2) are documented in the patient's medical record.
- C.** An administrator shall ensure that a patient is discharged from a behavioral health inpatient facility when the patient's treatment needs are not consistent with the services that the behavioral health inpatient facility is authorized and able to provide.
- D.** An administrator shall ensure that there is a documented discharge order by a medical practitioner or behavioral health professional before a patient is discharged unless the patient leaves the behavioral health inpatient facility against a medical practitioner's or behavioral health professional's advice.
- E.** An administrator shall ensure that, at the time of discharge, a patient receives a referral for treatment or ancillary services that the patient may need after discharge, if applicable.
- F.** If a patient is discharged to any location other than a health care institution, an administrator shall ensure that:
 - 1. Discharge instructions are documented, and
 - 2. The patient or the patient's representative is provided with a copy of the discharge instructions.
- G.** An administrator shall ensure that a discharge summary:
 - 1. Is entered into the patient's medical record within 10 working days after a patient's discharge; and
 - 2. Includes:
 - a. The following information authenticated by a medical practitioner or behavioral health professional:

- i. The patient's presenting issue and other physical health and behavioral health issues identified in the patient's nursing assessment, behavioral health assessment, or treatment plan;
 - ii. A summary of the treatment provided to the patient;
 - iii. The patient's progress in meeting treatment goals, including treatment goals that were and were not achieved; and
 - iv. The name, dosage, and frequency of each medication ordered for the patient by a medical practitioner at the behavioral health inpatient facility at the time of the patient's discharge; and
 - b. A description of the disposition of the patient's possessions, funds, or medications brought to the behavioral health inpatient facility by the patient.
- H. An administrator shall ensure that a patient who is dependent upon a prescribed medication is offered detoxification services, opioid treatment, or a written referral to detoxification services or opioid treatment before the patient is discharged from the behavioral health inpatient facility if a medical practitioner for the behavioral health inpatient facility will not be prescribing the medication for the patient at or after discharge.

Historical Note

New Section R9-10-309 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2).
Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-310. Transport; Transfer

- A. Except as provided in subsection (B), an administrator shall ensure that:
 - 1. A personnel member coordinates the transport and the services provided to the patient;
 - 2. According to policies and procedures:
 - a. An evaluation of the patient is conducted before and after the transport,
 - b. Information from the patient's medical record is provided to a receiving health care institution,
 - c. A personnel member explains risks and benefits of the transport to the patient or the patient's representative, and
 - d. A personnel member communicates or documents why the personnel member did not communicate with an individual at a receiving health care institution; and
 - 3. The patient's medical record includes documentation of:
 - a. Communication or lack of communication with an individual at a receiving health care institution;
 - b. The date and time of the transport;
 - c. The mode of transportation; and
 - d. If applicable, the name of the personnel member accompanying the patient during a transport.
- B. Subsection (A) does not apply to:
 - 1. Transportation to a location other than a licensed health care institution,
 - 2. Transportation provided for a patient by the patient or the patient's representative,
 - 3. Transportation provided by an outside entity that was arranged for a patient by the patient or the patient's representative, or
 - 4. A transport to another licensed health care institution in an emergency.
- C. Except for a transfer of a patient due to an emergency, an administrator shall ensure that:
 - 1. A personnel member coordinates the transfer and the services provided to the patient;
 - 2. According to policies and procedures:
 - a. An evaluation of the patient is conducted before the transfer;
 - b. Information from the patient's medical record, including orders that are in effect at the time of the transfer, is provided to a receiving health care institution; and
 - c. A personnel member explains risks and benefits of the transfer to the patient or the patient's representative; and
 - 3. Documentation in the patient's medical record includes:
 - a. Communication with an individual at a receiving health care institution;
 - b. The date and time of the transfer;
 - c. The mode of transportation; and
 - d. If applicable, the name of the personnel member accompanying the patient during a transfer.

Historical Note

Adopted as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 4, 1979 (Supp. 79-3). Amended effective January 28, 1980 (Supp. 80-1). Repealed effective February 4, 1981 (Supp. 81-1). New Section R9-10-310 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-311. Patient Rights

- A. An administrator shall ensure that:

1. The requirements in subsection (B) and the patient rights in subsection (D) are conspicuously posted on the premises;
 2. At the time of admission, a patient or the patient's representative receives a written copy of the requirements in subsection (B) and the patient rights in subsection (D); and
 3. Policies and procedures include:
 - a. How and when a patient or the patient's representative is informed of patient rights in subsection (D), and
 - b. Where patient rights are posted as required in subsection (A)(1).
- B.** An administrator shall ensure that:
1. A patient is treated with dignity, respect, and consideration;
 2. A patient is not subjected to:
 - a. Abuse;
 - b. Neglect;
 - c. Exploitation;
 - d. Coercion;
 - e. Manipulation;
 - f. Sexual abuse;
 - g. Sexual assault;
 - h. Except as allowed under R9-10-316, restraint or seclusion;
 - i. Retaliation for submitting a complaint to the Department or another entity;
 - j. Misappropriation of personal and private property by the behavioral health inpatient facility's personnel members, employees, volunteers, or students;
 - k. Discharge or transfer, or threat of discharge or transfer, for reasons unrelated to the patient's treatment needs, except as established in a fee agreement signed by the patient or the patient's representative; or
 - l. Treatment that involves the denial of:
 - i. Food,
 - ii. The opportunity to sleep, or
 - iii. The opportunity to use the toilet;
 3. Except as provided in subsection (C), a patient is allowed to:
 - a. Associate with individuals of the patient's choice, receive visitors, and make telephone calls during the hours established by the behavioral health inpatient facility;
 - b. Have privacy in correspondence, communication, visitation, financial affairs, and personal hygiene; and
 - c. Unless restricted by a court order, send and receive uncensored and unopened mail; and
 4. Except as provided in R9-10-318, a patient or, if applicable, the patient's representative:
 - a. Except in an emergency, either consents to or refuses treatment;
 - b. May refuse or withdraw consent for treatment before treatment is initiated, unless the treatment is ordered by a court according to A.R.S. Title 36, Chapter 5; is necessary to save the patient's life or physical health; or is provided according to A.R.S. § 36-512;
 - c. Except in an emergency, is informed of alternatives to a proposed psychotropic medication and the associated risks and possible complications of the proposed psychotropic medication;
 - d. Is informed of the following:
 - i. The policy on health care directives, and
 - ii. The patient complaint process; and
 - e. Except as otherwise permitted by law, provides written consent to the release of information in the patient's:
 - i. Medical record, or
 - ii. Financial records.
- C.** If a medical director or clinical director determines that a patient's treatment requires the behavioral health inpatient facility to restrict the patient's ability to participate in an activity in subsection (B)(3), the medical director or clinical director shall:
1. Document a specific treatment purpose in the patient's medical record that justifies restricting the patient from the activity,
 2. Inform the patient of the reason why the activity is being restricted, and
 3. Inform the patient of the patient's right to file a complaint and the procedure for filing a complaint.
- D.** A patient has the following rights:
1. Not to be discriminated against based on race, national origin, religion, gender, sexual orientation, age, disability, marital status, or diagnosis;
 2. To receive treatment that:
 - a. Supports and respects the patient's individuality, choices, strengths, and abilities;

- b. Supports the patient's personal liberty and only restricts the patient's personal liberty according to a court order, by the patient's or the patient's representative's general consent, or as permitted in this Chapter; and
- c. Is provided in the least restrictive environment that meets the patient's treatment needs;
- 3. To receive privacy in treatment and care for personal needs, including the right not to be fingerprinted, photographed, or recorded without consent, except:
 - a. A patient may be photographed when admitted to a behavioral health inpatient facility for identification and administrative purposes;
 - b. For a patient receiving treatment according to A.R.S. Title 36, Chapter 37; or
 - c. For video recordings used for security purposes that are maintained only on a temporary basis;
- 4. Not to be prevented or impeded from exercising the patient's civil rights unless the patient has been adjudicated incompetent or a court of competent jurisdiction has found that the patient is not able to exercise a specific right or category of rights;
- 5. To review, upon written request, the patient's own medical record according to A.R.S. §§12-2293, 12-2294, and 12-2294.01;
- 6. To receive a referral to another health care institution if the behavioral health inpatient facility is not authorized or not able to provide physical health services or behavioral health services needed by the patient;
- 7. To participate or have the patient's representative participate in the development of a treatment plan or decisions concerning treatment;
- 8. To participate or refuse to participate in research or experimental treatment; and
- 9. To receive assistance from a family member, the patient's representative, or other individual in understanding, protecting, or exercising the patient's rights.

Historical Note

Section R9-10-311, formerly numbered as R9-10-211, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-311 repealed, new Section R9-10-311 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-311 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-312. Medical Records

- A.** An administrator shall ensure that:
 - 1. A medical record is established and maintained for each patient according to A.R.S. Title 12, Chapter 13, Article 7.1;
 - 2. An entry in a patient's medical record is:
 - a. Recorded only by a personnel member authorized by policies and procedures to make the entry;
 - b. Dated, legible, and authenticated; and
 - c. Not changed to make the initial entry illegible;
 - 3. An order is:
 - a. Dated when the order is entered in the patient's medical record and includes the time of the order;
 - b. Authenticated by a medical practitioner or behavioral health professional according to policies and procedures; and
 - c. If the order is a verbal order, authenticated by the medical practitioner or behavioral health professional issuing the order;
 - 4. If a rubber-stamp signature or an electronic signature is used to authenticate an order, the individual whose signature the rubber-stamp signature or electronic signature represents is accountable for the use of the rubber-stamp signature or electronic signature;
 - 5. A patient's medical record is available to an individual:
 - a. Authorized according to policies and procedures to access the patient's medical record;
 - b. If the individual is not authorized according to policies and procedures, with the written consent of the patient or the patient's representative, or
 - c. As permitted by law; and
 - 6. A patient's medical record is protected from loss, damage, or unauthorized use.
- B.** If a behavioral health inpatient facility maintains patients' medical records electronically, an administrator shall ensure that:
 - 1. Safeguards exist to prevent unauthorized access, and
 - 2. The date and time of an entry in a medical record is recorded by the computer's internal clock.
- C.** An administrator shall ensure that a patient's medical record contains:
 - 1. Patient information that includes:
 - a. The patient's name;

- b. The patient's address;
- c. The patient's date of birth; and
- d. Any known allergy, including medication allergies;
- 2. Medication information that includes:
 - a. Documentation of medication ordered for the patient; and
 - b. Documentation of medication administered to the patient that includes:
 - i. The date and time of administration;
 - ii. The name, strength, dosage, amount, and route of administration;
 - iii. For a medication administered for pain on a PRN basis:
 - (1) An assessment of the patient's pain before administering the medication, and
 - (2) The effect of the medication administered;
 - iv. For a psychotropic medication administered on a PRN basis:
 - (1) An assessment of the patient's behavior before administering the psychotropic medication, and
 - (2) The effect of the psychotropic medication administered;
 - v. The identification and authentication of the individual administering the medication or providing assistance in the self-administration of the medication; and
 - vi. Any adverse reaction the patient has to the medication;
- 3. If applicable, documented general consent and informed consent by the patient or the patient's representative;
- 4. If applicable, the name and contact information of the patient's representative and:
 - a. If the patient is 18 years of age or older or an emancipated minor, the document signed by the patient consenting for the patient's representative to act on the patient's behalf; or
 - b. If the patient's representative:
 - i. Has a health care power of attorney established under A.R.S. § 36-3221 or a mental health care power of attorney executed under A.R.S. § 36-3282, a copy of the health care power of attorney or mental health care power of attorney; or
 - ii. Is a legal guardian, a copy of the court order establishing guardianship;
- 5. The patient's medical history and results of a physical examination or an interval note;
- 6. If the patient provides a health care directive, the health care directive signed by the patient or the patient's representative;
- 7. An admitting diagnosis or presenting symptoms;
- 8. The date of admission and, if applicable, the date of discharge;
- 9. The name of the admitting medical practitioner or behavioral health professional;
- 10. Orders;
- 11. The patient's nursing assessment and behavioral health assessment and any interval notes;
- 12. Treatment plans;
- 13. Documentation of behavioral health services and physical health services provided to the patient;
- 14. Progress notes;
- 15. If applicable, documentation of restraint or seclusion;
- 16. If applicable, documentation that evacuation from the behavioral health inpatient facility would cause harm to the patient;
- 17. The disposition of the patient after discharge;
- 18. The discharge plan;
- 19. The discharge summary; and
- 20. If applicable:
 - a. A laboratory report,
 - b. A radiologic report,
 - c. A diagnostic report, and
 - d. A consultation report.

Historical Note

Section R9-10-312, formerly numbered as R9-10-212, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-312 repealed, new Section R9-10-312 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-312 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-313. Transportation; Patient Outings

- A. An administrator of a behavioral health inpatient facility that uses a vehicle owned or leased by the behavioral health inpatient facility to provide transportation to a patient shall ensure that:
 - 1. The vehicle:

- a. Is safe and in good repair;
 - b. Contains a first aid kit;
 - c. Contains drinking water sufficient to meet the needs of each patient present in the vehicle, and
 - d. Contains a working heating and air conditioning system;
2. Documentation of current vehicle insurance and a record of maintenance performed or a repair of the vehicle is maintained;
 3. A driver of the vehicle:
 - a. Is 21 years of age or older;
 - b. Has a valid driver license;
 - c. Operates the vehicle in a manner that does not endanger a patient in the vehicle;
 - d. Does not leave in the vehicle an unattended:
 - i. Child;
 - ii. Patient who may be a threat to the health, safety, or welfare of the patient or another individual; or
 - iii. Patient who is incapable of independent exit from the vehicle; and
 - e. Ensures the safe and hazard-free loading and unloading of patients; and
 4. Transportation safety is maintained as follows:
 - a. An individual in the vehicle is sitting in a seat and wearing a working seat belt while the vehicle is in motion, and
 - b. Each seat in the vehicle is securely fastened to the vehicle and provides sufficient space for a patient's body.
- B.** An administrator shall ensure that an outing is consistent with the age, developmental level, physical ability, medical condition, and treatment needs of each patient participating in the outing.
- C.** An administrator shall ensure that:
1. At least two personnel members are present on an outing;
 2. In addition to the personnel members required in subsection (C)(1), a sufficient number of personnel members are present on an outing to ensure the health and safety of a patient on the outing;
 3. Each personnel member on the outing has documentation of current training in cardiopulmonary resuscitation according to R9-10-303(C)(1)(e) and first aid training;
 4. Documentation is developed before an outing that includes:
 - a. The name of each patient participating in the outing;
 - b. A description of the outing;
 - c. The date of the outing;
 - d. The anticipated departure and return times;
 - e. The name, address, and, if available, telephone number of the outing destination; and
 - f. If applicable, the license plate number of a vehicle used to provide transportation for the outing;
 5. The documentation described in subsection (C)(4) is updated to include the actual departure and return times and is maintained for at least 12 months after the date of the outing; and
 6. Emergency information for a patient participating in the outing is maintained by a personnel member participating in the outing or in the vehicle used to provide transportation for the outing and includes:
 - a. The patient's name;
 - b. Medication information, including the name, dosage, route of administration, and directions for each medication needed by the patient during the anticipated duration of the outing;
 - c. The patient's allergies; and
 - d. The name and telephone number of a designated individual, to notify in case of an emergency, who is present on the behavioral health inpatient facility's premises.

Historical Note

Section R9-10-313, formerly numbered as R9-10-213, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-313 repealed, new Section R9-10-313 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-313 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-314. Physical Health Services

- A.** An administrator shall ensure that:
1. Medical services are provided under the direction of a physician;
 2. Nursing services are provided under the direction of a registered nurse; and
 3. If a behavioral health inpatient facility is authorized to provide:
 - a. Clinical laboratory services, as defined in R9-10-101, the behavioral health inpatient facility complies with the requirements for clinical laboratory services in R9-10-219; or

- b. Radiology services or diagnostic imaging services, the behavioral health inpatient facility complies with the requirements in R9-10-220.
- B. An administrator shall ensure that, if a patient requires immediate medical services to ensure the patient's health and safety that the behavioral health inpatient facility is not authorized or not able to provide, a personnel member arranges for the patient to be transported to a hospital, another health care institution, or a health care provider where the medical services can be provided.

Historical Note

Section R9-10-314, formerly numbered as R9-10-214, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-314 repealed, new Section R9-10-314 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-314 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-315. Behavioral Health Services

- A. An administrator shall ensure that:
 - 1. Behavioral health services listed in the behavioral health inpatient facility's scope of services are provided to meet the needs of a patient;
 - 2. When behavioral health services are:
 - a. Listed in the behavioral health inpatient facility's scope of services, the behavioral health services are provided on the behavioral health inpatient facility's premises; and
 - b. Provided in a setting or activity with more than one patient participating, before a patient participates, the diagnoses, treatment needs, developmental levels, social skills, verbal skills, and personal histories, including any history of physical abuse or sexual abuse, of the patients participating are reviewed to ensure that the:
 - i. Health and safety of each patient is protected, and
 - ii. Treatment needs of each patient participating in the setting or activity are being met; and
 - 3. A patient does not share any space, participate in any activity or treatment, or verbally or physically interact with any other patient that, based on the other patient's documented diagnosis, treatment needs, developmental levels, social skills, verbal skills, and personal history, may present a threat to the patient's health and safety.
- B. An administrator shall ensure that counseling is:
 - 1. Offered as described in the behavioral health inpatient facility's scope of services,
 - 2. Provided according to the frequency and number of hours identified in the patient's treatment plan, and
 - 3. Provided by a behavioral health professional or a behavioral health technician.
- C. An administrator shall ensure that each counseling session is documented in a patient's medical record to include:
 - 1. The date of the counseling session;
 - 2. The amount of time spent in the counseling session;
 - 3. Whether the counseling was individual counseling, family counseling, or group counseling;
 - 4. The treatment goals addressed in the counseling session; and
 - 5. The signature of the personnel member who provided the counseling and the date signed.
- D. An administrator of a behavioral health inpatient facility authorized to provide pre-petition screening shall ensure pre-petition screening is provided according to the pre-petition screening requirements in A.R.S. Title 36, Chapter 5.
- E. An administrator of a behavioral health inpatient facility authorized to provide court-ordered evaluation shall ensure that court-ordered evaluation is provided according to the court-evaluation requirements in A.R.S. Title 36, Chapter 5.
- F. An administrator is not required to comply with the following provisions in this Chapter for a patient receiving court-ordered evaluation:
 - 1. Admission requirements in R9-10-307,
 - 2. Patient assessment requirements in R9-10-307,
 - 3. Treatment plan requirements in R9-10-308, and
 - 4. Discharge requirements in R9-10-309.
- G. An administrator of a behavioral health inpatient facility authorized to provide court-ordered treatment shall ensure that court-ordered treatment is provided according to the court-ordered treatment requirements in A.R.S. Title 36, Chapter 5.

Historical Note

Section R9-10-315, formerly numbered as R9-10-215, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-315 repealed, new Section R9-10-315 adopted effective February 4, 1981

(Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-315 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-316. Seclusion; Restraint

- A. An administrator shall ensure that restraint is provided according to the requirements in subsection (C).
- B. An administrator of a behavioral health inpatient facility authorized to provide seclusion shall ensure that:
 - 1. Seclusion is provided according to the requirements in subsection (C);
 - 2. If a patient is placed in seclusion, the room used for seclusion:
 - a. Is approved for use as a seclusion room by the Department;
 - b. Is not used as a patient's bedroom or a sleeping area;
 - c. Allows full view of the patient in all areas of the room;
 - d. Is free of hazards, such as unprotected light fixtures or electrical outlets;
 - e. Contains at least 60 square feet of floor space; and
 - f. Except as provided in subsection (B)(3), contains a non-adjustable bed that:
 - i. Consists of a mattress on a solid platform that is:
 - (1) Constructed of a durable, non-hazardous material; and
 - (2) Raised off of the floor;
 - ii. Does not have wire springs or a storage drawer; and
 - iii. Is securely anchored in place;
 - 3. If a room used for seclusion does not contain a non-adjustable bed required in subsection (B)(2)(f):
 - a. A piece of equipment is available that:
 - i. Is commercially manufactured to safely and humanely restrain a patient's body;
 - ii. Provides support to the trunk and head of a patient's body;
 - iii. Provides restraint to the trunk of a patient's body;
 - iv. Is able to restrict movement of a patient's arms, legs, body, and head;
 - v. Allows a patient's body to recline; and
 - vi. Does not inflict harm on a patient's body; and
 - b. Documentation of the manufacturer's specifications for the piece of equipment in subsection (B)(3)(a) is maintained; and
 - 4. A seclusion room may be used for services or activities other than seclusion if:
 - a. A sign stating the service or activity scheduled or being provided in the room is conspicuously posted outside the room;
 - b. No permanent equipment other than the bed required in subsection (B)(2)(f) is in the room;
 - c. Policies and procedures:
 - i. Delineate which services or activities other than seclusion may be provided in the room,
 - ii. List what types of equipment or supplies may be placed in the room for the delineated services, and
 - iii. Provide for the prompt removal of equipment and supplies from the room before the room is used for seclusion; and
 - d. The sign required in subsection (B)(4)(a) and equipment and supplies in the room, other than the bed required in subsection (B)(2)(f), are removed before use.
- C. An administrator shall ensure that:
 - 1. Policies and procedures for providing restraint or seclusion are established, documented, and implemented to protect the health and safety of a patient that:
 - a. Establish the process for patient assessment, including identification of a patient's medical conditions and criteria for the on-going monitoring of any identified medical condition;
 - b. Identify each type of restraint or seclusion used and include for each type of restraint or seclusion used:
 - i. The qualifications of a personnel member who can:
 - (1) Order the restraint or seclusion,
 - (2) Place a patient in the restraint or seclusion,
 - (3) Monitor a patient in the restraint or seclusion,
 - (4) Evaluate a patient's physical and psychological well-being after being placed in the restraint or seclusion and when released from the restraint or seclusion, or
 - (5) Renew the order for restraint or seclusion;
 - ii. On-going training requirements for a personnel member who has direct patient contact while the patient is in a restraint or seclusion; and
 - iii. Criteria for monitoring and assessing a patient including:
 - (1) Frequencies of monitoring and assessment based on a patient's medical condition and risks associated with the specific restraint or seclusion;
 - (2) For the renewal of an order for restraint or seclusion, whether an assessment is required before the order is renewed and, if an assessment is required, who may conduct the assessment;

- (3) Assessment content, which may include, depending on a patient's condition, the patient's vital signs, respiration, circulation, hydration needs, elimination needs, level of distress and agitation, mental status, cognitive functioning, neurological functioning, and skin integrity;
 - (4) If a mechanical restraint is used, how often the mechanical restraint is loosened; and
 - (5) A process for meeting a patient's nutritional needs and elimination needs;
 - c. Establish the criteria and procedures for renewing an order for restraint or seclusion;
 - d. Establish procedures for internal review of the use of restraint or seclusion;
 - and
 - e. Establish medical record and personnel record documentation requirements for restraint and seclusion, if applicable;
- 2. An order for restraint or seclusion is:
 - a. Obtained from a physician or registered nurse practitioner, and
 - b. Not written as a standing order or on an as-needed basis;
- 3. Restraint or seclusion is:
 - a. Not used as a means of coercion, discipline, convenience, or retaliation;
 - b. Only used when all of the following conditions are met:
 - i. Except as provided in subsection (C)(4), after obtaining an order for the restraint or seclusion;
 - ii. For the management of a patient's aggressive, violent, or self-destructive behavior;
 - iii. When less restrictive interventions have been determined to be ineffective; and
 - iv. To ensure the immediate physical safety of the patient, to prevent imminent harm to the patient or another individual, or to stop physical harm to another individual; and
 - c. Discontinued at the earliest possible time;
- 4. If as a result of a patient's aggressive, violent, or self-destructive behavior, harm to the patient or another individual is imminent or the patient or another individual is being physically harmed, a personnel member:
 - a. May initiate an emergency application of restraint or seclusion for the patient before obtaining an order for the restraint or seclusion, and
 - b. Obtains an order for the restraint or seclusion of the patient during the emergency application of the restraint or seclusion;
- 5. An order for restraint or seclusion includes:
 - a. The name of the physician or registered nurse practitioner ordering the restraint or seclusion;
 - b. The date and time that the restraint or seclusion was ordered;
 - c. The specific restraint or seclusion ordered;
 - d. If a drug is ordered as a chemical restraint, the drug's name, strength, dosage, and route of administration;
 - e. The specific criteria for release from restraint or seclusion without an additional order; and
 - f. The maximum duration authorized for the restraint or seclusion;
- 6. An order for restraint or seclusion is limited to the duration of the emergency situation and does not exceed three continuous hours;
- 7. If an order for restraint or seclusion of a patient is not provided by the patient's attending physician, the patient's attending physician is notified as soon as possible;
- 8. A medical practitioner or personnel member does not participate in restraint or seclusion, assess or monitor a patient during restraint or seclusion, or evaluate a patient after restraint or seclusion, and a physician or registered nurse practitioner does not order restraint or seclusion, until the medical practitioner or personnel member, completes education and training that:
 - a. Includes:
 - i. Techniques to identify medical practitioner, personnel member, and patient behaviors, events, and environmental factors that may trigger circumstances that require restraint or seclusion;
 - ii. The use of nonphysical intervention skills, such as de-escalation, mediation, conflict resolution, active listening, and verbal and observational methods;
 - iii. Techniques for identifying the least restrictive intervention based on an assessment of the patient's medical or behavioral health condition;
 - iv. The safe use of restraint and the safe use of seclusion, including training in how to recognize and respond to signs of physical and psychological distress in a patient who is restrained or secluded;
 - v. Clinical identification of specific behavioral changes that indicate that the restraint or seclusion is no longer necessary;
 - vi. Monitoring and assessing a patient while the patient is in restraint or seclusion according to policies and procedures; and
 - vii. Except for the medical practitioner, training exercises in which the personnel member successfully demonstrates the techniques that the medical practitioner or personnel member has learned for managing emergency situations; and
 - b. Is provided by individuals qualified according to policies and procedures;

9. When a patient is placed in restraint or seclusion:
 - a. The restraint or seclusion is conducted according to policies and procedures;
 - b. The restraint or seclusion is proportionate and appropriate to the severity of the patient's behavior and the patient's:
 - i. Chronological and developmental age;
 - ii. Size;
 - iii. Gender;
 - iv. Physical condition;
 - v. Medical condition;
 - vi. Psychiatric condition; and
 - vii. Personal history, including any history of physical or sexual abuse;
 - c. The physician or registered nurse practitioner who ordered the restraint or seclusion is available for consultation throughout the duration of the restraint or seclusion;
 - d. The patient is monitored and assessed according to policies and procedures;
 - e. A physician or registered nurse assesses the patient within one hour after the patient is placed in the restraint or seclusion and determines:
 - i. The patient's current behavior,
 - ii. The patient's reaction to the restraint or seclusion used,
 - iii. The patient's medical and behavioral condition, and
 - iv. Whether to continue or terminate the restraint or seclusion;
 - f. The patient is given the opportunity:
 - i. To eat during mealtime, and
 - ii. To use the toilet; and
 - g. The restraint or seclusion is discontinued at the earliest possible time, regardless of the length of time identified in the order;
10. A medical practitioner or personnel member documents the following information in a patient's medical record before the end of the shift in which the patient is placed in restraint or seclusion or, if the patient's restraint or seclusion does not end during the shift in which it began, during the shift in which the patient's restraint or seclusion ends:
 - a. The emergency situation that required the patient to be restrained or put in seclusion;
 - b. The times the patient's restraint or seclusion actually began and ended;
 - c. The time of the assessment required in subsection (C)(9)(e);
 - d. The monitoring required in subsection (C)(9)(d);
 - e. The names of the medical practitioners and personnel members with direct patient contact while the patient was in the restraint or seclusion;
 - f. The times the patient was given the opportunity to eat or use the toilet according to subsection (C)(9)(f); and
 - g. The patient evaluation required in subsection (C)(12);
11. If an emergency situation continues beyond the time limit of an order for restraint or seclusion, the order is renewed according to policies and procedures that include:
 - a. The specific criteria for release from restraint or seclusion without an additional order, and
 - b. The maximum duration authorized for the restraint or seclusion; and
12. A patient is evaluated after restraint or seclusion is no longer being used for the patient.

Historical Note

Section R9-10-316, formerly numbered as R9-10-216, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-316 repealed, new Section R9-10-316 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-316 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-317. Behavioral Health Observation/Stabilization Services

- A.** An administrator of a behavioral health inpatient facility authorized to provide behavioral health observation/stabilization services shall comply with the requirements for behavioral health observation/stabilization services in R9-10-1012.
- B.** If a behavioral health inpatient facility is authorized to provide behavioral health observation/stabilization services to individuals under 18 years of age, an administrator shall ensure that, in addition to complying with the requirements in R9-10-1012, the behavioral health inpatient facility complies with the requirements for a patient under 18 years of age, personnel records, and physical plant in R9-10-318.

Historical Note

Section R9-10-317, formerly numbered as R9-10-221, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-317 repealed, new Section R9-10-317 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-317 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). Amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-318. Child and Adolescent Residential Treatment Services

- A.** An administrator of a behavioral health inpatient facility authorized to provide child and adolescent residential treatment services shall:
1. If abuse, neglect, or exploitation of a patient under 18 years of age is alleged or suspected to have occurred before the patient was accepted or while the patient is not on the premises and not receiving services from an employee or personnel member of the behavioral health inpatient facility, report the alleged or suspected abuse, neglect, or exploitation of the patient according to A.R.S. § 13-3620;
 2. If the administrator has a reasonable basis, according to A.R.S. § 13-3620, to believe that abuse, neglect, or exploitation of a patient under 18 years of age has occurred on the premises or while the patient is receiving services from an employee or a personnel member:
 - a. If applicable, take immediate action to stop the suspected abuse, neglect, or exploitation;
 - b. Report the suspected abuse, neglect, or exploitation of the patient according to A.R.S. § 13-3620;
 - c. Document:
 - i. The suspected abuse, neglect, or exploitation;
 - ii. Any action taken according to subsection (A)(2)(a); and
 - iii. The report in subsection (A)(2)(b);
 - d. Maintain the documentation in subsection (A)(2)(c) for at least 12 months after the date of the report in subsection (A)(2)(b);
 - e. Initiate an investigation of the suspected abuse, neglect, or exploitation and document the following information within five working days after the report required in subsection (A)(2)(b):
 - i. The dates, times, and description of the suspected abuse, neglect, or exploitation;
 - ii. A description of any injury to the patient related to the suspected abuse or neglect and any change to the patient's physical, cognitive, functional, or emotional condition;
 - iii. The names of witnesses to the suspected abuse, neglect, or exploitation; and
 - iv. The actions taken by the administrator to prevent the suspected abuse, neglect, or exploitation from occurring in the future; and
 - f. Maintain a copy of the documented information required in subsection (A)(2)(c) and any other information obtained during the investigation for at least 12 months after the date the investigation was initiated;
 3. If a patient who is under 18 years of age is absent and the absence is unauthorized as determined according to the criteria in R9-10-303(H), within an hour after determining that the patient's absence is unauthorized, notify:
 - a. Except as provided in subsection (A)(3)(b), the patient's parent or legal guardian; and
 - b. For a patient who is under a court's jurisdiction, the appropriate court or a person designated by the appropriate court;
 4. Document the notification in subsection (A)(3) in the patient's medical record and the written log required in R9-10-303(I)(3);
 5. In addition to the personnel records requirements in R9-10-306(F), ensure that a personnel record for each employee, volunteer, and student contains documentation of the individual's compliance with the fingerprinting requirements in A.R.S. § 36-425.03;
 6. Ensure that the patient's representative for a patient who is under 18 years of age:
 - a. Except in an emergency, either consents to or refuses treatment;
 - b. May refuse or withdraw consent to treatment before treatment is initiated, unless the treatment is ordered by a court according to A.R.S. Title 36, Chapter 5 or A.R.S. § 8-341.01; is necessary to save the patient's life or physical health; or is provided according to A.R.S. § 36-512;
 - c. Except in an emergency, is informed of alternatives to a proposed psychotropic medication and the associated risks and possible complications of the proposed psychotropic medication;
 - d. Is informed of the following:
 - i. The policy on health care directives, and
 - ii. The patient complaint process; and
 - e. Except as otherwise permitted by law, provides written consent to the release of information in the patient's:
 - i. Medical record, or

- ii. Financial records;
- 7. In addition to the restrictions provided in R9-10-311(C), ensure that a parent of a patient under 18 years of age is allowed to restrict the patient from:
 - a. Associating with individuals of the patient's choice, receiving visitors, and making telephone calls during the hours established by the behavioral health inpatient facility;
 - b. Having privacy in correspondence, communication, visitation, financial affairs, and personal hygiene; and
 - c. Sending and receiving uncensored and unopened mail;
- 8. Establish, document, and implement policies and procedures to ensure that a patient is protected from the following from other patients at the behavioral health inpatient facility:
 - a. Threats,
 - b. Ridicule,
 - c. Verbal harassment,
 - d. Punishment, or
 - e. Abuse;
- 9. Ensure that:
 - a. The interior of the behavioral health inpatient facility has furnishings and decorations appropriate to the ages of the patients receiving services at the behavioral health inpatient facility;
 - b. A patient older than three years of age does not sleep in a crib;
 - c. Clean and non-hazardous toys, educational materials, and physical activity equipment are available and accessible to patients in a quantity sufficient to meet each patient's needs and are appropriate to each patient's age, developmental level, and treatment needs; and
 - d. A patient's educational needs are met by establishing and providing an educational component, approved in writing by the Arizona Department of Education;
- 10. In addition to the requirements for seclusion or restraint in R9-10-316, ensure that:
 - a. An order for restraint or seclusion is limited to the duration of the emergency situation and does not exceed:
 - i. Two continuous hours for a patient who is between the ages of nine and 17, or
 - ii. One continuous hour for a patient who is younger than nine; and
 - b. Requirements are established for notifying the parent or guardian of a patient who is under 18 years of age and who is restrained or secluded; and
- 11. Prohibit a patient under 18 years of age from possessing or using tobacco products on the premises.
- B.** An administrator of a behavioral health inpatient facility authorized to provide child and adolescent residential treatment services may continue to provide behavioral health services to a patient who is 18 years of age or older:
 - 1. If the patient:
 - a. Was admitted to the behavioral health inpatient facility before the patient's 18th birthday,
 - b. Is not 21 years of age or older, and
 - c. Is completing high school or a high school equivalency diploma or participating in a job training program; or
 - 2. Through the last calendar day of the month of the patient's 18th birthday.

Historical Note

Section R9-10-318, formerly numbered as R9-10-222, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-318 repealed, new Section R9-10-318 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-318 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). R9-10-318 renumbered to R9-10-319; new Section made by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-319. Detoxification Services

An administrator of a behavioral health inpatient facility authorized to provide detoxification services shall ensure that:

- 1. Detoxification services are available;
- 2. Policies and procedures state:
 - a. Whether the behavioral health inpatient facility is authorized to provide involuntary, court-ordered alcohol treatment;
 - b. Whether the behavioral health inpatient facility includes a local alcoholism reception center, as defined in A.R.S. § 36-2021;
 - c. The types of substances for which the behavioral health inpatient facility provides detoxification services;
 - d. The detoxification process or processes used by the behavioral health inpatient facility; and

- e. When an adjustable bed can be used by a patient and what actions are necessary, including supervision, to protect the patient's health and safety when the patient is in an adjustable bed; and
- 3. A physician or registered nurse practitioner with skills and knowledge in providing detoxification services is present at the behavioral health inpatient facility or on-call.

Historical Note

Section R9-10-319, formerly numbered as R9-10-223, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-319 repealed, new Section R9-10-319 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-319 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). R9-10-319 renumbered to R9-10-320; new Section R9-10-319 renumbered from R9-10-318 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-320. Medication Services

- A. An administrator shall ensure that policies and procedures for medication services:
 - 1. Include:
 - a. A process for providing information to a patient about medication prescribed for the patient including:
 - i. The prescribed medication's anticipated results,
 - ii. The prescribed medication's potential adverse reactions,
 - iii. The prescribed medication's potential side effects, and
 - iv. Potential adverse reactions that could result from not taking the medication as prescribed;
 - b. Procedures for preventing, responding to, and reporting:
 - i. A medication error,
 - ii. An adverse reaction to a medication, or
 - iii. A medication overdose;
 - c. Procedures to ensure that a patient's medication regimen is reviewed by a medical practitioner to ensure the medication regimen meets the patient's needs;
 - d. Procedures for documenting medication administration and assistance in the self-administration of medication;
 - e. Procedures for assisting a patient in obtaining medication; and
 - f. If applicable, procedures for providing medication administration or assistance in the self-administration of medication off the premises; and
 - 2. Specify a process for review through the quality management program of:
 - a. A medication administration error, and
 - b. An adverse reaction to a medication.
- B. If a behavioral health inpatient facility provides medication administration, an administrator shall ensure that:
 - 1. Policies and procedures for medication administration:
 - a. Are reviewed and approved by a medical practitioner;
 - b. Specify the individuals who may:
 - i. Order medication, and
 - ii. Administer medication;
 - c. Ensure that medication is administered to a patient only as prescribed; and
 - d. Cover the documentation of a patient's refusal to take prescribed medication in the patient's medical record;
 - 2. Verbal orders for medication services are taken by a nurse, unless otherwise provided by law; and
 - 3. A medication administered to a patient is:
 - a. Administered in compliance with an order, and
 - b. Documented in the patient's medical record.
- C. If a behavioral health inpatient facility provides assistance in the self-administration of medication, an administrator shall ensure that:
 - 1. A patient's medication is stored by the behavioral health inpatient facility;
 - 2. The following assistance is provided to a patient:
 - a. A reminder when it is time to take the medication;
 - b. Opening the medication container for the patient;
 - c. Observing the patient while the patient removes the medication from the container;
 - d. Verifying that the medication is taken as ordered by the patient's medical practitioner by confirming that:
 - i. The patient taking the medication is the individual stated on the medication container label,

- ii. The patient is taking the dosage of the medication stated on the medication container label or according to an order from a medical practitioner dated later than the date on the medication container label, and
 - iii. The patient is taking the medication at the time stated on the medication container label or according to an order from a medical practitioner dated later than the date on the medication container label; or
 - e. Observing the patient while the patient takes the medication;
 - 3. Policies and procedures for assistance in the self-administration of medication are reviewed and approved by a medical practitioner or registered nurse;
 - 4. Training for a personnel member, other than a medical practitioner or registered nurse, in assistance in the self-administration of medication:
 - a. Is provided by a medical practitioner or registered nurse or an individual trained by a medical practitioner or registered nurse; and
 - b. Includes:
 - i. A demonstration of the personnel member's skills and knowledge necessary to provide assistance in the self-administration of medication,
 - ii. Identification of medication errors and medical emergencies related to medication that require emergency medical intervention, and
 - iii. The process for notifying the appropriate entities when an emergency medical intervention is needed;
 - 5. A personnel member, other than a medical practitioner or registered nurse, completes the training in subsection (C)(4) before the personnel member provides assistance in the self-administration of medication; and
 - 6. Assistance in the self-administration of medication provided to a patient:
 - a. Is in compliance with an order, and
 - b. Is documented in the patient's medical record.
 - D. An administrator shall ensure that:
 - 1. A current drug reference guide is available for use by personnel members;
 - 2. A current toxicology reference guide is available for use by personnel members; and
 - 3. If pharmaceutical services are provided on the premises:
 - a. A committee, composed of at least one physician, one pharmacist, and other personnel members as determined by policies and procedures, is established to:
 - i. Develop a drug formulary,
 - ii. Update the drug formulary at least once every 12 months,
 - iii. Develop medication usage and medication substitution policies and procedures, and
 - iv. Specify which medications and medication classifications are required to be stopped automatically after a specific time period unless the ordering medical practitioner specifically orders otherwise;
 - b. The pharmaceutical services are provided under the direction of a pharmacist;
 - c. The pharmaceutical services comply with A.R.S. Title 36, Chapter 27; A.R.S. Title 32, Chapter 18; and 4 A.A.C. 23; and
 - d. A copy of the pharmacy license is provided to the Department upon request.
 - E. When medication is stored at a behavioral health inpatient facility, an administrator shall ensure that:
 - 1. Medication is stored in a separate locked room, closet, or self-contained unit used only for medication storage;
 - 2. Medication is stored according to the instructions on the medication container; and
 - 3. Policies and procedures are established, documented, and implemented for:
 - a. Receiving, storing, inventorying, tracking, dispensing, and discarding medication, including expired medication;
 - b. Discarding or returning prepackaged and sample medication to the manufacturer if the manufacturer requests the discard or return of the medication;
 - c. A medication recall and notification of patients who received recalled medication; and
 - d. Storing, inventorying, and dispensing controlled substances.
 - F. An administrator shall ensure that a personnel member immediately reports a medication error or a patient's adverse reaction to a medication to the medical practitioner who ordered the medication and, if applicable, the behavioral health inpatient facility's clinical director.

Historical Note

Section R9-10-320, formerly numbered as R9-10-231, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-320 repealed, new Section R9-10-320 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-320 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp.

13-2). R9-10-320 renumbered to R9-10-321; new Section R9-10-320 renumbered from R9-10-319 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-321. Food Services

- A.** An administrator shall ensure that:
1. The behavioral health inpatient facility obtains a license or permit as a food establishment under 9 A.A.C. 8, Article 1;
 2. A copy of the behavioral health inpatient facility's food establishment license or permit is maintained;
 3. If a behavioral health inpatient facility contracts with a food establishment, as established in 9 A.A.C. 8, Article 1, to prepare and deliver food to the behavioral health inpatient facility:
 - a. A copy of the contracted food establishment's license or permit under 9 A.A.C. 8, Article 1 is maintained by the behavioral health inpatient facility; and
 - b. The behavioral health inpatient facility is able to store, refrigerate, and reheat food to meet the dietary needs of a patient;
 4. A registered dietitian is employed full-time, part-time, or as a consultant; and
 5. If a registered dietitian is not employed full-time, an individual is designated as a director of food services who consults with a registered dietitian as often as necessary to meet the nutritional needs of the patients.
- B.** A registered dietitian or director of food services shall ensure that:
1. A food menu:
 - a. Is prepared at least one week in advance,
 - b. Includes the foods to be served each day,
 - c. Is conspicuously posted at least one calendar day before the first meal on the food menu will be served,
 - d. Includes any food substitution no later than the morning of the day of meal service with a food substitution, and
 - e. Is maintained for at least 60 calendar days after the last day included in the food menu;
 2. Meals and snacks provided by the behavioral health inpatient facility are served according to posted menus;
 3. Meals and snacks for each day are planned using:
 - a. The applicable guidelines in <http://www.health.gov/dietaryguidelines/2010.asp>, and
 - b. Preferences for meals and snacks obtained from patients;
 4. A patient is provided:
 - a. A diet that meets the patient's nutritional needs as specified in the patient's assessment or treatment plan;
 - b. Three meals a day with not more than 14 hours between the evening meal and breakfast except as provided in subsection (B)(4)(d);
 - c. The option to have a daily evening snack identified in subsection (B)(4)(d)(ii) or other snack; and
 - d. The option to extend the time span between the evening meal and breakfast from 14 hours to 16 hours if:
 - i. A patient group agrees; and
 - ii. The patient is offered an evening snack that includes meat, fish, eggs, cheese, or other protein, and a serving from either the fruit and vegetable food group or the bread and cereal food group;
 5. A patient requiring assistance to eat is provided with assistance that recognizes the patient's nutritional, physical, and social needs, including the use of adaptive eating equipment or utensils; and
 6. Water is available and accessible to patients.
- C.** An administrator shall ensure that food is obtained, prepared, served, and stored as follows:
1. Food is free from spoilage, filth, or other contamination and is safe for human consumption;
 2. Food is protected from potential contamination;
 3. Food is prepared:
 - a. Using methods that conserve nutritional value, flavor, and appearance; and
 - b. In a form to meet the needs of a patient such as cut, chopped, ground, pureed, or thickened;
 4. Potentially hazardous food is maintained as follows:
 - a. Foods requiring refrigeration are maintained at 41° F or below; and
 - b. Foods requiring cooking are cooked to heat all parts of the food to a temperature of at least 145° F for 15 seconds, except that:
 - i. Ground beef and ground meats are cooked to heat all parts of the food to at least 155° F;
 - ii. Poultry, poultry stuffing, stuffed meats, and stuffing that contains meat are cooked to heat all parts of the food to at least 165° F;
 - iii. Pork and any food containing pork are cooked to heat all parts of the food to at least 155° F;
 - iv. Raw shell eggs for immediate consumption are cooked to at least 145° F for 15 seconds and any food containing raw shell eggs is cooked to heat all parts of the food to at least 155° F;
 - v. Roast beef and beef steak are cooked to an internal temperature of at least 155° F; and
 - vi. Leftovers are reheated to a temperature of at least 165° F;

5. A refrigerator contains a thermometer, accurate to plus or minus 3° F, placed at the warmest part of the refrigerator;
6. Frozen foods are stored at a temperature of 0° F or below; and
7. Tableware, utensils, equipment, and food-contact surfaces are clean and in good repair.

Historical Note

Section R9-10-321, formerly numbered as R9-10-232, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-321 repealed, new Section R9-10-321 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-321 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). R9-10-321 renumbered to R9-10-322; new Section R9-10-321 renumbered from R9-10-320 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-322. Emergency and Safety Standards

- A. An administrator shall ensure that a behavioral health inpatient facility has:
 1. A fire alarm system installed according to the National Fire Protection Association 72: National Fire Alarm and Signaling Code, incorporated by reference in A.A.C. R9-1-412, and a sprinkler system installed according to the National Fire Protection Association 13 Standard for the Installation of Sprinkler Systems, incorporated by reference in A.A.C. R9-1-412, that are in working order; or
 2. An alternative method to ensure a patient's safety, documented and approved by the local jurisdiction.
- B. An administrator shall ensure that:
 1. A disaster plan is developed, documented, maintained in a location accessible to personnel members and other employees, and, if necessary, implemented that includes:
 - a. When, how, and where patients will be relocated;
 - b. How a patient's medical record will be available to individuals providing services to the patient during a disaster;
 - c. A plan to ensure each patient's medication will be available to administer to the patient during a disaster; and
 - d. A plan for obtaining food and water for individuals present in the behavioral health inpatient facility or the behavioral health inpatient facility's relocation site during a disaster;
 2. The disaster plan required in subsection (B)(1) is reviewed at least once every 12 months;
 3. Documentation of a disaster plan review required in subsection (B)(2) is created, is maintained for at least 12 months after the date of the disaster plan review, and includes:
 - a. The date and time of the disaster plan review;
 - b. The name of each personnel member, employee, volunteer, or student participating in the disaster plan review;
 - c. A critique of the disaster plan review; and
 - d. If applicable, recommendations for improvement;
 4. A disaster drill for employees is conducted on each shift at least once every three months and documented;
 5. An evacuation drill for employees and patients:
 - a. Is conducted at least once every six months; and
 - b. Includes all individuals on the premises except for:
 - i. A patient whose medical record contains documentation that evacuation from the behavioral health inpatient facility would cause harm to the patient, and
 - ii. Sufficient personnel members to ensure the health and safety of patients not evacuated according to subsection (B)(5)(b)(i);
 6. Documentation of each evacuation drill is created, is maintained for at least 12 months after the date of the evacuation drill, and includes:
 - a. The date and time of the evacuation drill;
 - b. The amount of time taken for employees and patients to evacuate to a designated area;
 - c. If applicable:
 - i. An identification of patients needing assistance for evacuation, and
 - ii. An identification of patients who were not evacuated;
 - d. Any problems encountered in conducting the evacuation drill; and
 - e. Recommendations for improvement, if applicable; and
 7. An evacuation path is conspicuously posted on each hallway of each floor of the behavioral health inpatient facility.
- C. An administrator shall:
 1. Obtain a fire inspection conducted according to the time-frame established by the local fire department or the State Fire Marshal,

2. Make any repairs or corrections stated on the fire inspection report, and
3. Maintain documentation of a current fire inspection.

Historical Note

Section R9-10-322, formerly numbered as R9-10-233, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-322 repealed, new Section R9-10-322 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-322 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). R9-10-322 renumbered to R9-10-323; new Section R9-10-322 renumbered from R9-10-321 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-323. Environmental Standards

- A.** An administrator shall ensure that:
1. The premises and equipment are:
 - a. Cleaned and, if applicable, disinfected according to policies and procedures designed to prevent, minimize, and control illness or infection; and
 - b. Free from a condition or situation that may cause a patient or other individual to suffer physical injury;
 2. A pest control program is implemented and documented;
 3. Biohazardous medical waste is identified, stored, and disposed of according to 18 A.A.C. 13, Article 14 and policies and procedures;
 4. Equipment used at the behavioral health inpatient facility is:
 - a. Maintained in working order;
 - b. Tested and calibrated according to the manufacturer's recommendations or, if there are no manufacturer's recommendations, as specified in policies and procedures; and
 - c. Used according to the manufacturer's recommendations;
 5. Documentation of equipment testing, calibration, and repair is maintained for at least 12 months after the date of the testing, calibration, or repair;
 6. Garbage and refuse are:
 - a. In areas used for food storage, food preparation, or food service, stored in covered containers lined with plastic bags;
 - b. In areas not used for food storage, food preparation, or food service, stored:
 - i. According to the requirements in subsection (6)(a), or
 - ii. In a paper-lined container that is cleaned and sanitized as often as necessary to ensure that the container is clean; and
 - c. Removed from the premises at least once a week;
 7. Heating and cooling systems maintain the behavioral health inpatient facility at a temperature between 70° F and 84° F;
 8. Common areas:
 - a. Are lighted to assure the safety of patients, and
 - b. Have lighting sufficient to allow personnel members to monitor patient activity;
 9. Hot water temperatures are maintained between 95° F and 120° F in the areas of a behavioral health inpatient facility used by patients;
 10. The supply of hot and cold water is sufficient to meet the personal hygiene needs of patients and the cleaning and sanitation requirements in this Article;
 11. Soiled linen and soiled clothing stored by the behavioral health inpatient facility are maintained separate from clean linen and clothing and stored in closed containers away from food storage, kitchen, and dining areas;
 12. Oxygen containers are secured in an upright position;
 13. Poisonous or toxic materials stored by the behavioral health inpatient facility are maintained in labeled containers in a locked area separate from food preparation and storage, dining areas, and medications and are inaccessible to patients;
 14. Combustible or flammable liquids and hazardous materials stored by a behavioral health inpatient facility are stored in the original labeled containers or safety containers in a locked area inaccessible to patients;
 15. If pets or animals are allowed in the behavioral health inpatient facility, pets or animals are:
 - a. Controlled to prevent endangering the patients and to maintain sanitation;
 - b. Licensed consistent with local ordinances; and
 - c. For a dog or cat, vaccinated against rabies;
 16. If a water source that is not regulated under 18 A.A.C. 4 by the Arizona Department of Environmental Quality is used:
 - a. The water source is tested at least once every 12 months for total coliform bacteria and fecal coliform or *E. coli* bacteria;

- b. If necessary, corrective action is taken to ensure the water is safe to drink; and
 - c. Documentation of testing is maintained for at least 12 months after the date of the test; and
- 17. If a non-municipal sewage system is used, the sewage system is in working order and is maintained according to applicable state laws and rules.
- B.** An administrator shall ensure that:
 - 1. Smoking tobacco products is not permitted within a behavioral health inpatient facility; and
 - 2. Except as provided in R9-10-318(A)(11), smoking tobacco products may be permitted on the premises outside a behavioral health inpatient facility if:
 - a. Signs designating smoking areas are conspicuously posted, and
 - b. Smoking is prohibited in areas where combustible materials are stored or in use.
- C.** If a swimming pool is located on the premises, an administrator shall ensure that:
 - 1. At least one personnel member with cardiopulmonary resuscitation training that meets the requirements in R9-10-303(C)(1)(e) is present in the pool area when a patient is in the pool area, and
 - 2. At least two personnel members are present in the pool area when two or more patients are in the pool area.

Historical Note

Section R9-10-323, formerly numbered as R9-10-234, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-323 repealed, new Section R9-10-323 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-323 made by exempt rulemaking at 19 A.A.R. 2015, effective October 1, 2013 (Supp. 13-2). R9-10-323 renumbered to R9-10-324; new Section R9-10-323 renumbered from R9-10-322 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-324. Physical Plant Standards

- A.** An administrator shall ensure that the premises and equipment are sufficient to accommodate:
 - 1. The services stated in the behavioral health inpatient facility's scope of services, and
 - 2. An individual accepted as a patient by the behavioral health inpatient facility.
- B.** An administrator shall ensure that:
 - 1. A behavioral health inpatient facility has a:
 - a. Waiting area with seating for patients and visitors;
 - b. Room that provides privacy for a patient to receive treatment or visitors; and
 - c. Common area and a dining area that:
 - i. Are not converted, partitioned, or otherwise used as a sleeping area; and
 - ii. Contain furniture and materials to accommodate the recreational and socialization needs of the patients and other individuals in the behavioral health inpatient facility;
 - 2. A bathroom is available for use by visitors during the behavioral health inpatient facility's hours of operation and:
 - a. Provides privacy; and
 - b. Contains:
 - i. A working sink with running water,
 - ii. A working toilet that flushes and has a seat,
 - iii. Toilet tissue,
 - iv. Soap for hand washing,
 - v. Paper towels or a mechanical air hand dryer,
 - vi. Lighting, and
 - vii. A window that opens or another means of ventilation;
 - 3. For every six patients, there is at least one working toilet that flushes and has a seat and one sink with running water;
 - 4. For every eight patients, there is at least one working bathtub or shower with a slip-resistant surface;
 - 5. A patient bathroom complies with the following:
 - a. Provides privacy when in use;
 - b. Contains:
 - i. A shatterproof mirror, unless the patient's treatment plan requires otherwise;
 - ii. A window that opens or another means of ventilation; and
 - iii. Nonporous surfaces for shower enclosures and slip-resistant surfaces in tubs and showers;
 - c. Has plumbing, piping, ductwork, or other potentially hazardous elements concealed above a ceiling;
 - d. If the bathroom or shower area has a door, the door swings outward to allow for staff emergency access;
 - e. If grab bars for the toilet and tub or shower or other assistive devices are identified in the patient's treatment plan, has grab bars or other assistive devices to provide for patient safety;

- f. If a grab bar is provided, has the space between the grab bar and the wall filled to prevent a cord being tied around the grab bar;
 - g. Does not contain a towel bar, a shower curtain rod, or a lever handle that is not a specifically designed anti-ligature lever handle;
 - h. Has tamper-resistant lighting fixtures, sprinkler heads, and electrical outlets; and
 - i. For a bathroom with a sprinkler head where a patient is not supervised while the patient is in the bathroom, has a sprinkler head that is recessed or designed to minimize patient access;
 - 6. If a patient bathroom door locks from the inside, an employee has a key and access to the bathroom;
 - 7. Each patient is provided a bedroom for sleeping;
 - 8. A patient bedroom complies with the following:
 - a. Is not used as a common area;
 - b. Is not used as a passageway to another bedroom or bathroom unless the bathroom is for the exclusive use of a patient occupying the bedroom;
 - c. Contains a door that opens into a hallway, common area, or outdoors and, except as provided in subsection (E), another means of egress;
 - d. Is constructed and furnished to provide unimpeded access to the door;
 - e. Has window or door covers that provide patient privacy;
 - f. Has floor to ceiling walls;
 - g. Is a:
 - i. Private bedroom that contains at least 60 square feet of floor space, not including the closet; or
 - ii. Shared bedroom that:
 - (1) Is shared by no more than four patients;
 - (2) Contains, except as provided in subsection (B)(9), at least 60 square feet of floor space, not including a closet, for each patient occupying the bedroom; and
 - (3) Provides sufficient space between beds to ensure that a patient has unobstructed access to the bedroom door;
 - h. Contains for each patient occupying the bedroom:
 - i. A bed that is: at least 36 inches wide and at least 72 inches long, and consists of at least a frame and mattress and linens that is not a threat to health and safety; and
 - ii. Individual storage space for personal effects and clothing such as shelves, a dresser, or chest of drawers;
 - i. Has clean linen for each bed including mattress pad, sheets large enough to tuck under the mattress, pillows, pillow cases, bedspread, waterproof mattress covers as needed, and blankets to ensure warmth and comfort for each patient;
 - j. Has sufficient lighting for a patient occupying the bedroom to read; and
 - k. If applicable, has a drawer pull that is recessed to eliminate the possibility of use as a tie-off point;
 - 9. If a behavioral health inpatient facility licensed before November 1, 2003 was approved for 50 square feet of floor space for each patient in a bedroom, ensure that the bedroom contains at least 50 square feet for each patient not including the closet;
 - 10. In a patient bathroom or a patient bedroom:
 - a. The ceiling is secured from access or at least 9 feet in height; and
 - b. A ventilation grille is:
 - i. Secured and has perforations that are too small to use as a tie-off point, or
 - ii. Of sufficient height to prevent patient access;
 - 11. For a door located in an area of the behavioral health inpatient facility that is accessible to patients:
 - a. A door closing device, if used on a patient bedroom door, is mounted on the public side of the door;
 - b. A door's hinges are designed to minimize points for hanging;
 - c. Except for a door lever handle that contains specifically designed anti-ligature hardware, a door lever handle points downward when in the latched or unlatched position; and
 - d. Hardware has tamper-resistant fasteners; and
 - 12. A window located in an area of the behavioral health inpatient facility that is accessible to patients is fabricated with laminated safety glass or protected by polycarbonate, laminate, or safety screens.
- C. An administrator of a licensed behavioral health inpatient facility may submit a request, in a Department-provided format, for additional time to comply with a physical plant requirement in subsection (B)(5)(c) through (B)(5)(i), (B)(10), (B)(11), or (B)(12) that includes:
- 1. The rule citation for the specific plant requirement,
 - 2. The current physical plant condition that does not comply with the physical plant requirement,
 - 3. How the current physical plant condition will be changed to comply with the physical plant requirement,
 - 4. Estimated completion date of the identified physical plant change, and
 - 5. Specific actions taken to ensure the health and safety of a patient until the physical plant requirement is met.

- D.** When the Department receives a request for additional time to comply with a physical plant requirement in subsection (B)(5)(c) through (B)(5)(i), (B)(10), (B)(11), or (B)(12) submitted according to subsection (C), the Department may approve the request for up to 24 months after the effective date of these rules based on:
1. The behavioral health inpatient facility's scope of services,
 2. The expected patient acuity based on the behavioral health inpatient facility's scope of services,
 3. The specific physical plant requirement in the request, and
 4. The threat to patients' health and safety.
- E.** A bedroom in a behavioral health inpatient facility is not required to have a second means of egress if:
1. An administrator ensures that policies and procedures are established, documented, and implemented that provide for the safe evacuation of a patient in the bedroom based on the patient's physical and mental limitations and the location of the bedroom; or
 2. The building where the bedroom is located has a fire alarm system and a sprinkler system required in R9-10-322(A)(1).
- F.** If a swimming pool is located on the premises, an administrator shall ensure that:
1. The swimming pool is enclosed by a wall or fence that:
 - a. Is at least five feet in height as measured on the exterior of the wall or fence;
 - b. Has no vertical openings greater than four inches across;
 - c. Has no horizontal openings, except as described in subsection (F)(1)(e);
 - d. Is not chain-link;
 - e. Does not have a space between the ground and the bottom fence rail that exceeds four inches in height; and
 - f. Has a self-closing, self-latching gate that:
 - i. Opens away from the swimming pool,
 - ii. Has a latch located at least 54 inches from the ground, and
 - iii. Is locked when the swimming pool is not in use; and
 2. A life preserver or shepherd's crook is available and accessible in the pool area.
- G.** An administrator shall ensure that a spa that is not enclosed by a wall or fence as described in subsection (F)(1) is covered and locked when not in use

Historical Note

Section R9-10-324, formerly numbered as R9-10-235, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-324 repealed, new Section R9-10-324 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2). New Section R9-10-324 renumbered from R9-10-323 and amended by exempt rulemaking at 20 A.A.R. 1409, pursuant to Laws 2013, Ch. 10, § 13; effective July 1, 2014 (Supp. 14-2).

R9-10-325. Repealed

Historical Note

Section R9-10-325, formerly numbered as R9-10-236, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-325 repealed, new Section R9-10-325 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-326. Repealed

Historical Note

Section R9-10-326, formerly numbered as R9-10-237, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-326 repealed, new Section R9-10-326 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-327. Repealed

Historical Note

Section R9-10-327, formerly numbered as R9-10-241, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-327 repealed, new Section R9-10-327 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-328. Repealed

Historical Note

Section R9-10-328, formerly numbered as R9-10-242, renumbered as an emergency effective February 22, 1979,

pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-328 repealed, new Section R9-10-328 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-329. Repealed

Historical Note

Section R9-10-329, formerly numbered as R9-10-243, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-329 repealed, new Section R9-10-329 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-330. Repealed

Historical Note

Section R9-10-330, formerly numbered as R9-10-244, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-330 repealed, new Section R9-10-330 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-331. Repealed

Historical Note

Section R9-10-331, formerly numbered as R9-10-245, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-331 repealed, new Section R9-10-331 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-332. Repealed

Historical Note

Section R9-10-332, formerly numbered as R9-10-246, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-332 repealed, new Section R9-10-332 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-333. Repealed

Historical Note

Section R9-10-333, formerly numbered as R9-10-247, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Former Section R9-10-333 repealed, new Section R9-10-333 adopted effective February 4, 1981 (Supp. 81-1). Section repealed by final rulemaking at 8 A.A.R. 2785, effective October 1, 2002 (Supp. 02-2).

R9-10-334. Repealed

Historical Note

Section R9-10-334, formerly numbered as R9-10-249, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Repealed effective February 4, 1981 (Supp. 81-1).

R9-10-335. Repealed

Historical Note

Section R9-10-335, formerly numbered as R9-10-250, renumbered as an emergency effective February 22, 1979, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 79-1). Adopted effective June 14, 1979 (Supp. 79-3). Repealed effective February 4, 1981 (Supp. 81-1).

36-132. [Department of health services; functions; contracts](#)

A. The department, in addition to other powers and duties vested in it by law, shall:

1. Protect the health of the people of the state.
2. Promote the development, maintenance, efficiency and effectiveness of local health departments or districts of sufficient population and area that they can be sustained with reasonable economy and efficient administration, provide technical consultation and assistance to local health departments or districts, provide financial assistance to local health departments or districts and services that meet minimum standards of personnel and performance and in accordance with a plan and budget submitted by the local health department or districts to the department for approval, and recommend the qualifications of all personnel.
3. Collect, preserve, tabulate and interpret all information required by law in reference to births, deaths and all vital facts, and obtain, collect and preserve information relating to the health of the people of this state and the prevention of diseases as may be useful in the discharge of functions of the department not in conflict with chapter 3 of this title and sections 36-693, 36-694 and 39-122.
4. Operate such sanitariums, hospitals or other facilities assigned to the department by law or by the governor.
5. Conduct a statewide program of health education relevant to the powers and duties of the department, prepare educational materials and disseminate information as to conditions affecting health, including basic information for the promotion of good health on the part of individuals and communities, and prepare and disseminate technical information concerning public health to the health professions, local health officials and hospitals. In cooperation with the department of education, the department of health services shall prepare and disseminate materials and give technical assistance for the purpose of education of children in hygiene, sanitation and personal and public health, and provide consultation and assistance in community organization to counties, communities and groups of people.
6. Administer or supervise a program of public health nursing, prescribe the minimum qualifications of all public health nurses engaged in official public health work, and encourage and aid in coordinating local public health nursing services.
7. Encourage and aid in coordinating local programs concerning control of preventable diseases in accordance with statewide plans that shall be formulated by the department.
8. Encourage and aid in coordinating local programs concerning maternal and child health, including midwifery, antepartum and postpartum care, infant and preschool health and the health of schoolchildren, including special fields such as the prevention of blindness and conservation of sight and hearing.

9. Encourage and aid in the coordination of local programs concerning nutrition of the people of this state.

10. Encourage, administer and provide dental health care services and aid in coordinating local programs concerning dental public health, in cooperation with the Arizona dental association. The department may bill and receive payment for costs associated with providing dental health care services and shall deposit the monies in the oral health fund established by section 36-138.

11. Establish and maintain adequate serological, bacteriological, parasitological, entomological and chemical laboratories with qualified assistants and facilities necessary for routine examinations and analyses and for investigations and research in matters affecting public health.

12. Supervise, inspect and enforce the rules concerning the operation of public bathing places and public and semipublic swimming pools adopted pursuant to section 36-136, subsection I, paragraph 10.

13. Take all actions necessary or appropriate to ensure that bottled water sold to the public and water used to process, store, handle, serve and transport food and drink are free from filth, disease-causing substances and organisms and unwholesome, poisonous, deleterious or other foreign substances. All state agencies and local health agencies involved with water quality shall provide to the department any assistance requested by the director to ensure that this paragraph is effectuated.

14. Enforce the state food, caustic alkali and acid laws in accordance with chapter 2, article 2 of this title, chapter 8, article 1 of this title and chapter 9, article 4 of this title, and collaborate in the enforcement of the federal food, drug, and cosmetic act (52 Stat. 1040; 21 United States Code sections 1 through 905).

15. Recruit and train personnel for state, local and district health departments.

16. Conduct continuing evaluations of state, local and district public health programs, study and appraise state health problems and develop broad plans for use by the department and for recommendation to other agencies, professions and local health departments for the best solution of these problems.

17. License and regulate health care institutions according to chapter 4 of this title.

18. Issue or direct the issuance of licenses and permits required by law.

19. Participate in the state civil defense program and develop the necessary organization and facilities to meet wartime or other disasters.

20. Subject to the availability of monies, develop and administer programs in perinatal health care, including:

- (a) Screening in early pregnancy for detecting high-risk conditions.
- (b) Comprehensive prenatal health care.
- (c) Maternity, delivery and postpartum care.
- (d) Perinatal consultation, including transportation of the pregnant woman to a perinatal care center when medically indicated.
- (e) Perinatal education oriented toward professionals and consumers, focusing on early detection and adequate intervention to avert premature labor and delivery.

21. License and regulate the health and safety of group homes for persons with developmental disabilities. The department shall issue a license to an accredited facility for a period of the accreditation, except that no licensing period shall be longer than three years. The department is authorized to conduct an inspection of an accredited facility to ensure that the facility meets health and safety licensure standards. The results of the accreditation survey shall be public information. A copy of the final accreditation report shall be filed with the department of health services. For the purposes of this paragraph, "accredited" means accredited by a nationally recognized accreditation organization.

B. The department may accept from the state or federal government, or any agency of the state or federal government, and from private donors, trusts, foundations or eleemosynary corporations or organizations grants or donations for or in aid of the construction or maintenance of any program, project, research or facility authorized by this title, or in aid of the extension or enforcement of any program, project or facility authorized, regulated or prohibited by this title, and enter into contracts with the federal government, or an agency of the federal government, and with private donors, trusts, foundations or eleemosynary corporations or organizations, to carry out such purposes. All monies made available under this section are special project grants. The department may also expend these monies to further applicable scientific research within this state.

C. The department, in establishing fees authorized by this section, shall comply with title 41, chapter 6. The department shall not set a fee at more than the department's cost of providing the service for which the fee is charged. State agencies are exempt from all fees imposed pursuant to this section.

D. The department may enter into contracts with organizations that perform nonrenal organ transplant operations and organizations that primarily assist in the management of end-stage renal disease and related problems to provide, as payors of last resort, prescription medications necessary to supplement treatment and transportation to and from treatment facilities. The contracts may provide for department payment of administrative costs it specifically authorizes.

36-136. [Powers and duties of director; compensation of personnel; rules; definition](#)

A. The director shall:

1. Be the executive officer of the department of health services and the state registrar of vital statistics but shall not receive compensation for services as registrar.
2. Perform all duties necessary to carry out the functions and responsibilities of the department.
3. Prescribe the organization of the department. The director shall appoint or remove personnel as necessary for the efficient work of the department and shall prescribe the duties of all personnel. The director may abolish any office or position in the department that the director believes is unnecessary.
4. Administer and enforce the laws relating to health and sanitation and the rules of the department.
5. Provide for the examination of any premises if the director has reasonable cause to believe that on the premises there exists a violation of any health law or rule of this state.
6. Exercise general supervision over all matters relating to sanitation and health throughout this state. When in the opinion of the director it is necessary or advisable, a sanitary survey of the whole or of any part of this state shall be made. The director may enter, examine and survey any source and means of water supply, sewage disposal plant, sewerage system, prison, public or private place of detention, asylum, hospital, school, public building, private institution, factory, workshop, tenement, public washroom, public restroom, public toilet and toilet facility, public eating room and restaurant, dairy, milk plant or food manufacturing or processing plant, and any premises in which the director has reason to believe there exists a violation of any health law or rule of this state that the director has the duty to administer.
7. Prepare sanitary and public health rules.
8. Perform other duties prescribed by law.

B. If the director has reasonable cause to believe that there exists a violation of any health law or rule of this state, the director may inspect any person or property in transportation through this state, and any car, boat, train, trailer, airplane or other vehicle in which that person or property is transported, and may enforce detention or disinfection as reasonably necessary for the public health if there exists a violation of any health law or rule.

C. The director, after consultation with the department of administration, may take all necessary steps to enhance the highest and best use of the state hospital property, including contracting with third parties to provide services, entering into short-term lease agreements with third parties to occupy or renovate existing buildings and entering into long-term lease agreements to develop the land and buildings. The director shall deposit any monies collected from contracts and lease

agreements entered into pursuant to this subsection in the Arizona state hospital charitable trust fund established by section 36-218. At least thirty days before issuing a request for proposals pursuant to this subsection, the department of health services shall hold a public hearing to receive community and provider input regarding the highest and best use of the state hospital property related to the request for proposals. The department shall report to the joint committee on capital review on the terms, conditions and purpose of any lease or sublease agreement entered into pursuant to this subsection relating to state hospital lands or buildings or the disposition of real property pursuant to this subsection, including state hospital lands or buildings, and the fiscal impact on the department and any revenues generated by the agreement. Any lease or sublease agreement entered into pursuant to this subsection relating to state hospital lands or buildings or the disposition of real property pursuant to this subsection, including state hospital lands or buildings, must be reviewed by the joint committee on capital review.

D. The director may deputize, in writing, any qualified officer or employee in the department to do or perform on the director's behalf any act the director is by law empowered to do or charged with the responsibility of doing.

E. The director may delegate to a local health department, county environmental department or public health services district any functions, powers or duties that the director believes can be competently, efficiently and properly performed by the local health department, county environmental department or public health services district if:

1. The director or superintendent of the local health agency, environmental agency or public health services district is willing to accept the delegation and agrees to perform or exercise the functions, powers and duties conferred in accordance with the standards of performance established by the director of the department of health services.

2. Monies appropriated or otherwise made available to the department for distribution to or division among counties or public health services districts for local health work may be allocated or reallocated in a manner designed to ensure the accomplishment of recognized local public health activities and delegated functions, powers and duties in accordance with applicable standards of performance. Whenever in the director's opinion there is cause, the director may terminate all or a part of any delegation and may reallocate all or a part of any funds that may have been conditioned on the further performance of the functions, powers or duties conferred.

F. The compensation of all personnel shall be as determined pursuant to section 38-611.

G. The director may make and amend rules necessary for the proper administration and enforcement of the laws relating to the public health.

H. Notwithstanding subsection I, paragraph 1 of this section, the director may define and prescribe emergency measures for detecting, reporting, preventing and controlling communicable or infectious diseases or conditions if the director has reasonable cause to believe that a serious threat to public health and welfare exists. Emergency measures are effective for no longer than eighteen months.

I. The director, by rule, shall:

1. Define and prescribe reasonably necessary measures for detecting, reporting, preventing and controlling communicable and preventable diseases. The rules shall declare certain diseases reportable. The rules shall prescribe measures, including isolation or quarantine, that are reasonably required to prevent the occurrence of, or to seek early detection and alleviation of, disability, insofar as possible, from communicable or preventable diseases. The rules shall include reasonably necessary measures to control animal diseases transmittable to humans.

2. Define and prescribe reasonably necessary measures, in addition to those prescribed by law, regarding the preparation, embalming, cremation, interment, disinterment and transportation of dead human bodies and the conduct of funerals, relating to and restricted to communicable diseases and regarding the removal, transportation, cremation, interment or disinterment of any dead human body.

3. Define and prescribe reasonably necessary procedures that are not inconsistent with law in regard to the use and accessibility of vital records, delayed birth registration and the completion, change and amendment of vital records.

4. Except as relating to the beneficial use of wildlife meat by public institutions and charitable organizations pursuant to title 17, prescribe reasonably necessary measures to ensure that all food or drink, including meat and meat products and milk and milk products sold at the retail level, provided for human consumption is free from unwholesome, poisonous or other foreign substances and filth, insects or disease-causing organisms. The rules shall prescribe reasonably necessary measures governing the production, processing, labeling, storing, handling, serving and transportation of these products. The rules shall prescribe minimum standards for the sanitary facilities and conditions that shall be maintained in any warehouse, restaurant or other premises, except a meat packing plant, slaughterhouse, wholesale meat processing plant, dairy product manufacturing plant or trade product manufacturing plant. The rules shall prescribe minimum standards for any truck or other vehicle in which food or drink is produced, processed, stored, handled, served or transported. The rules shall provide for the inspection and licensing of premises and vehicles so used, and for abatement as public nuisances of any premises or vehicles that do not comply with the rules and minimum standards. The rules shall provide an exemption relating to food or drink that is:

(a) Served at a noncommercial social event such as a potluck.

(b) Prepared at a cooking school that is conducted in an owner-occupied home.

(c) Not potentially hazardous and prepared in a kitchen of a private home for occasional sale or distribution for noncommercial purposes.

(d) Prepared or served at an employee-conducted function that lasts less than four hours and is not regularly scheduled, such as an employee recognition, an employee fund-raising or an employee social event.

(e) Offered at a child care facility and limited to commercially prepackaged food that is not potentially hazardous and whole fruits and vegetables that are washed and cut on-site for immediate consumption.

(f) Offered at locations that sell only commercially prepackaged food or drink that is not potentially hazardous.

(g) Baked and confectionary goods that are not potentially hazardous and that are prepared in a kitchen of a private home for commercial purposes if packaged with a label that clearly states the address of the maker, includes contact information for the maker, lists all the ingredients in the product and discloses that the product was prepared in a home. The label must be given to the final consumer of the product. If the product was made in a facility for individuals with developmental disabilities, the label must also disclose that fact. The person preparing the food or supervising the food preparation must obtain a food handler's card or certificate if one is issued by the local county and must register with an online registry established by the department pursuant to paragraph 13 of this subsection. For the purposes of this subdivision, "potentially hazardous" means baked and confectionary goods that meet the requirements of the food code published by the United States food and drug administration, as modified and incorporated by reference by the department by rule.

(h) A whole fruit or vegetable grown in a public school garden that is washed and cut on-site for immediate consumption.

5. Prescribe reasonably necessary measures to ensure that all meat and meat products for human consumption handled at the retail level are delivered in a manner and from sources approved by the Arizona department of agriculture and are free from unwholesome, poisonous or other foreign substances and filth, insects or disease-causing organisms. The rules shall prescribe standards for sanitary facilities to be used in identity, storage, handling and sale of all meat and meat products sold at the retail level.

6. Prescribe reasonably necessary measures regarding production, processing, labeling, handling, serving and transportation of bottled water to ensure that all bottled drinking water distributed for human consumption is free from unwholesome, poisonous, deleterious or other foreign substances and filth or disease-causing organisms. The rules shall prescribe minimum standards for the sanitary facilities and conditions that shall be maintained at any source of water, bottling plant and truck or vehicle in which bottled water is produced, processed, stored or transported and shall provide for inspection and certification of bottled drinking water sources, plants, processes and transportation and for abatement as a public nuisance of any water supply, label, premises, equipment, process or vehicle that does not comply with the minimum standards. The rules shall prescribe minimum standards for bacteriological, physical and chemical quality for bottled water and for the submission of samples at intervals prescribed in the standards.

7. Define and prescribe reasonably necessary measures governing ice production, handling, storing and distribution to ensure that all ice sold or distributed for human consumption or for the preservation or storage of food for human consumption is free from unwholesome, poisonous, deleterious or other foreign substances and filth or disease-causing organisms. The rules shall

prescribe minimum standards for the sanitary facilities and conditions and the quality of ice that shall be maintained at any ice plant, storage and truck or vehicle in which ice is produced, stored, handled or transported and shall provide for inspection and licensing of the premises and vehicles, and for abatement as public nuisances of ice, premises, equipment, processes or vehicles that do not comply with the minimum standards.

8. Define and prescribe reasonably necessary measures concerning sewage and excreta disposal, garbage and trash collection, storage and disposal, and water supply for recreational and summer camps, campgrounds, motels, tourist courts, trailer coach parks and hotels. The rules shall prescribe minimum standards for preparation of food in community kitchens, adequacy of excreta disposal, garbage and trash collection, storage and disposal and water supply for recreational and summer camps, campgrounds, motels, tourist courts, trailer coach parks and hotels and shall provide for inspection of these premises and for abatement as public nuisances of any premises or facilities that do not comply with the rules. Primitive camp and picnic grounds offered by this state or a political subdivision of this state are exempt from rules adopted pursuant to this paragraph but are subject to approval by a county health department under sanitary regulations adopted pursuant to section 36-183.02. Rules adopted pursuant to this paragraph do not apply to two or fewer recreational vehicles as defined in section 33-2102 that are not park models or park trailers, that are parked on owner-occupied residential property for less than sixty days and for which no rent or other compensation is paid. For the purposes of this paragraph, "primitive camp and picnic grounds" means camp and picnic grounds that are remote in nature and without accessibility to public infrastructure such as water, electricity and sewer.

9. Define and prescribe reasonably necessary measures concerning the sewage and excreta disposal, garbage and trash collection, storage and disposal, water supply and food preparation of all public schools. The rules shall prescribe minimum standards for sanitary conditions that shall be maintained in any public school and shall provide for inspection of these premises and facilities and for abatement as public nuisances of any premises that do not comply with the minimum standards.

10. Prescribe reasonably necessary measures to prevent pollution of water used in public or semipublic swimming pools and bathing places and to prevent deleterious health conditions at these places. The rules shall prescribe minimum standards for sanitary conditions that shall be maintained at any public or semipublic swimming pool or bathing place and shall provide for inspection of these premises and for abatement as public nuisances of any premises and facilities that do not comply with the minimum standards. The rules shall be developed in cooperation with the director of the department of environmental quality and shall be consistent with the rules adopted by the director of the department of environmental quality pursuant to section 49-104, subsection B, paragraph 12.

11. Prescribe reasonably necessary measures to keep confidential information relating to diagnostic findings and treatment of patients, as well as information relating to contacts, suspects and associates of communicable disease patients. In no event shall confidential information be made available for political or commercial purposes.

12. Prescribe reasonably necessary measures regarding human immunodeficiency virus testing as a means to control the transmission of that virus, including the designation of anonymous test sites as dictated by current epidemiologic and scientific evidence.

13. Establish an online registry of food preparers that are authorized to prepare food for commercial purposes pursuant to paragraph 4 of this subsection.

14. Prescribe an exclusion for fetal demise cases from the standardized survey known as "the hospital consumer assessment of healthcare providers and systems".

J. The rules adopted under the authority conferred by this section shall be observed throughout the state and shall be enforced by each local board of health or public health services district, but this section does not limit the right of any local board of health or county board of supervisors to adopt ordinances and rules as authorized by law within its jurisdiction, provided that the ordinances and rules do not conflict with state law and are equal to or more restrictive than the rules of the director.

K. The powers and duties prescribed by this section do not apply in instances in which regulatory powers and duties relating to public health are vested by the legislature in any other state board, commission, agency or instrumentality, except that with regard to the regulation of meat and meat products, the department of health services and the Arizona department of agriculture within the area delegated to each shall adopt rules that are not in conflict.

L. The director, in establishing fees authorized by this section, shall comply with title 41, chapter 6. The department shall not set a fee at more than the department's cost of providing the service for which the fee is charged. State agencies are exempt from all fees imposed pursuant to this section.

M. After consultation with the state superintendent of public instruction, the director shall prescribe the criteria the department shall use in deciding whether or not to notify a local school district that a pupil in the district has tested positive for the human immunodeficiency virus antibody. The director shall prescribe the procedure by which the department shall notify a school district if, pursuant to these criteria, the department determines that notification is warranted in a particular situation. This procedure shall include a requirement that before notification the department shall determine to its satisfaction that the district has an appropriate policy relating to nondiscrimination of the infected pupil and confidentiality of test results and that proper educational counseling has been or will be provided to staff and pupils.

N. Until the department adopts exemptions by rule as required by subsection I, paragraph 4, subdivision (f) of this section, food and drink are exempt from the rules prescribed in subsection I of this section if offered at locations that sell only commercially prepackaged food or drink that is not potentially hazardous, without a limitation on its display area.

O. Until the department adopts exemptions by rule as required by subsection I, paragraph 4, subdivision (h) of this section, a whole fruit or vegetable grown in a public school garden that is

washed and cut on-site for immediate consumption is exempt from the rules prescribed in subsection I of this section.

P. Until the department adopts an exclusion by rule as required by subsection I, paragraph 14 of this section, the standardized survey known as "the hospital consumer assessment of healthcare providers and systems" may not include patients who experience a fetal demise.

Q. For the purposes of this section, "fetal demise" means a fetal death that occurs or is confirmed in a licensed hospital. Fetal demise does not include an abortion as defined in section 36-2151.

36-405. Powers and duties of the director

A. The director shall adopt rules to establish minimum standards and requirements for the construction, modification and licensure of health care institutions necessary to ensure the public health, safety and welfare. The standards and requirements shall relate to the construction, equipment, sanitation, staffing for medical, nursing and personal care services, and recordkeeping pertaining to the administration of medical, nursing, behavioral health and personal care services, in accordance with generally accepted practices of health care. The director shall use the current standards adopted by the joint commission on accreditation of hospitals and the commission on accreditation of the American osteopathic association or those adopted by any recognized accreditation organization approved by the department as guidelines in prescribing minimum standards and requirements under this section.

B. The director, by rule, may:

1. Classify and subclassify health care institutions according to character, size, range of services provided, medical or dental specialty offered, duration of care and standard of patient care required for the purposes of licensure. Classes of health care institutions may include hospitals, infirmaries, outpatient treatment centers, health screening services centers and residential care facilities. Whenever the director reasonably deems distinctions in rules and standards to be appropriate among different classes or subclasses of health care institutions, the director may make such distinctions.

2. Prescribe standards for determining a health care institution's substantial compliance with licensure requirements.

3. Prescribe the criteria for the licensure inspection process.

4. Prescribe standards for the selection of health care-related demonstration projects.

5. Establish nonrefundable application and licensing fees for health care institutions, including a grace period and a fee for the late payment of licensing fees, and fees for architectural plans and specifications reviews.

6. Establish a process for the department to notify a licensee of the licensee's licensing fee due date.

7. Establish a process for a licensee to request a different licensing fee due date, including any limits on the number of requests by the licensee.

C. The director, by rule, shall adopt licensing provisions that facilitate the colocation and integration of outpatient treatment centers that provide medical, nursing and health-related services with behavioral health services consistent with article 3.1 of this chapter.

D. Ninety percent of the fees collected pursuant to this section shall be deposited, pursuant to sections 35-146 and 35-147, in the health services licensing fund established by section 36-414 and ten percent of the fees collected pursuant to this section shall be deposited, pursuant to sections 35-146 and 35-147, in the state general fund.

E. Subsection B, paragraph 5 of this section does not apply to a health care institution operated by a state agency pursuant to state or federal law or to adult foster care residential settings.

36-421. Construction or modification of a health care institution

A. A license application for a health care institution shall include architectural plans and specifications or the department's approval of the architectural plans and specifications. These plans and specifications shall meet the minimum standards for licensure within the class or subclass of health care institution for which it is intended. The application shall include the name and address of each owner and lessee of any agricultural land that is regulated pursuant to section 3-365.

B. Construction or modification of a licensed health care institution shall meet the minimum standards for licensure within the class or subclass of health care institution for which it is intended.

C. An applicant shall comply with all state statutes and rules and local codes and ordinances required for the health care institution's construction.

D. A health care institution or its facility shall not be licensed if it is located on property that is less than four hundred feet from agricultural land that is regulated pursuant to section 3-365, except that the owner of the agricultural land may agree to comply with the buffer zone requirements of section 3-365. If the owner agrees in writing to comply with the buffer zone requirements and records the agreement in the office of the county recorder as a restrictive covenant running with the title to the land, the health care institution or facility may be licensed and located within the affected buffer zone. The agreement may include any stipulations regarding the health care institution or facility, including conditions for future expansion of the health care institution or facility and changes in the operational status of the health care institution or facility that will result in a breach of the agreement. This subsection does not apply to the issuance of a license for a health care institution located in the same location for which a health care institution license was previously issued.

E. Notwithstanding any law to the contrary, a health care institution that was licensed as a level 1 psychiatric acute behavioral health facility-inpatient facility as of January 1, 2012 and that is not certified under title XIX of the social security act shall be licensed as a hospital and is not required to comply with the physical plant standards for a general hospital, rural general hospital or special hospital prescribed by the department.

F. For the purposes of this section, health care institution does not include a home health agency or a hospice service agency.

36-502. Powers and duties of the director of AHCCCS; rules; expenditure limitation

A. The director shall make rules that include standards for agencies other than the state hospital when providing services and shall prescribe forms as may be necessary for the proper administration and enforcement of this chapter. The rules shall be applicable to patients admitted to or treated in agencies, other than the state hospital, as set forth in this chapter and shall provide for periodic inspections of such agencies.

B. The director shall make rules concerning the admission of patients and the transfer of patients between mental health treatment agencies other than the state hospital. A patient undergoing court-ordered treatment may be transferred from one mental health treatment agency to another in accordance with the rules of the director, subject to the approval of the court.

C. The director may make rules concerning leaves, visits and absences of patients from evaluation agencies and mental health treatment agencies other than the state hospital.

D. The total amount of state monies that may be spent in any fiscal year by the administration for mental health services pursuant to this chapter may not exceed the amount appropriated or authorized by section 35-173 for that purpose. This chapter does not impose a duty on an officer, agent or employee of this state to discharge a responsibility or create any right in a person or group if the discharge or right would require an expenditure of state monies in excess of the expenditure authorized by legislative appropriation for that specific purpose.